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S. DEPARTMENT OF AGRICULTURE
OFFICE OF EXPERIMENT STATIONS
A. W. HARRIS, DIRECTOR

EXPERIMENT STATION BULLETIN No. 11

A COMPILATION OF ANALYSES

OF

AMERICAN FEEDING STUFFS

BY

E. H. JENKINS, Ph. D.
AND
A. L. WINTON, Ph. B.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE

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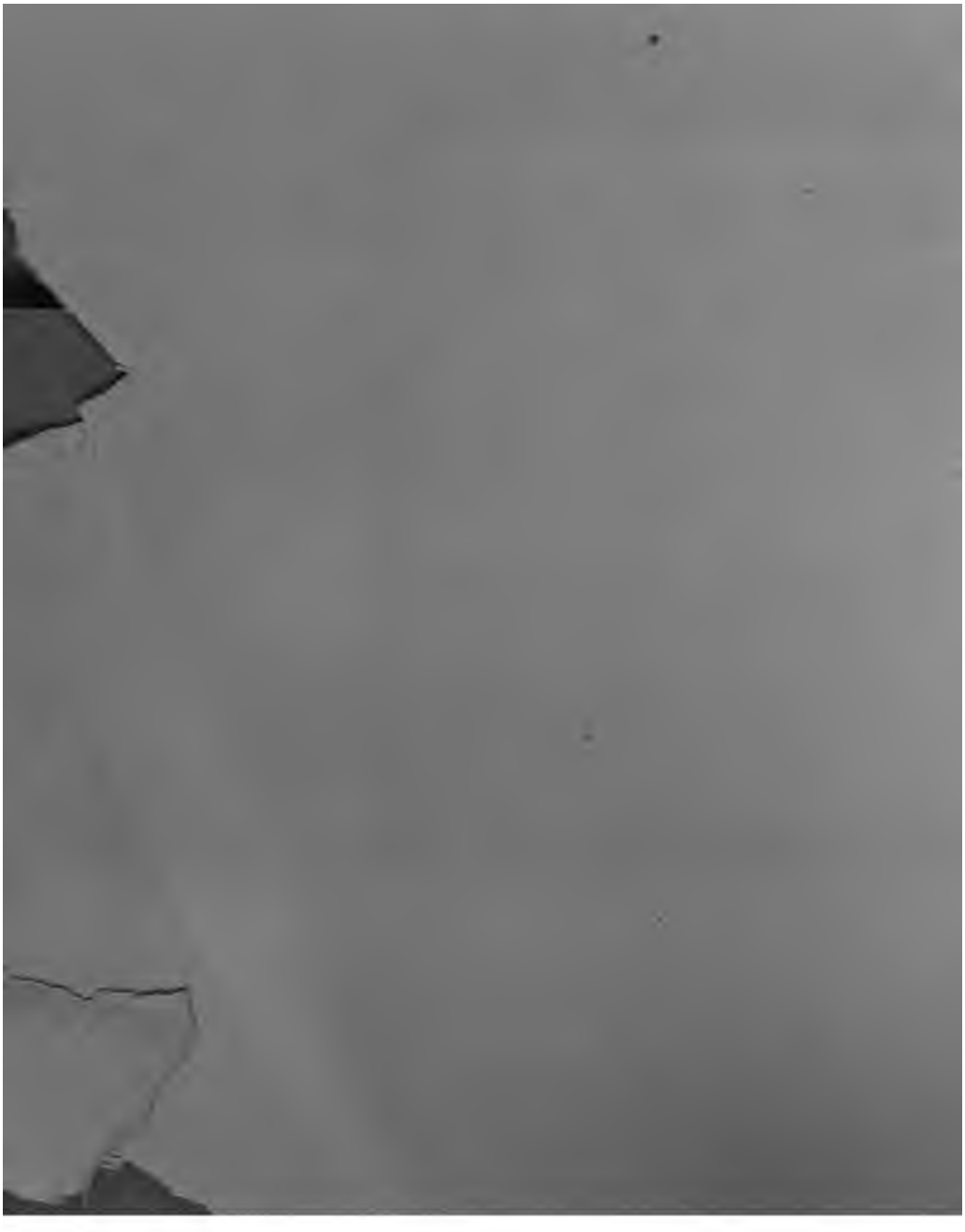

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U. S. DEPARTMENT OF AGRICULTURE

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INTRODUCTORY NOTE.

The following compilation is intended to include all analyses of American feeding stuffs which were accessible to the compilers at the time the work was done, with the exception of those which were so incomplete or so obviously erroneous as to leave no doubt about the propriety of excluding them.

The compilation was designed to include all analyses which were published before September 1, 1890. It was not possible to do this, as the latest publications of some of the stations were, for various reasons, not accessible when needed. In the following list is given the name of each station and the date or number of the latest issue of report and bulletin examined by the compilers.

Station.	Report for the year.	Bulletin number.
Alabama — Canebrake Station	1888	6
Alabama — College Station	1889	17
Arizona	.....	.....
Arkansas	1889	12
California	1887	87
Colorado	1889	11
Connecticut — State Station, Middletown	All	All
Connecticut — State Station, New Haven	1889	105
Connecticut — Storrs Station	1889	5
Delaware	1889	6
Florida	.....	10
Georgia	1889	8
Illinois	1889	11
Indiana	1888	32
Iowa	1888	10
Kansas	1888	11
Kentucky	.....	30
Louisiana — Sugar Station	1889	28
Louisiana — State Station	1889	26
Louisiana — North Louisiana Station	1889	27
Maine	1889[a]	26
Maryland	1888	10
Massachusetts — State Station	1889	37
Massachusetts — Hatch Station	1889	9
Michigan	1889	6
Minnesota	1888	12
Mississippi	1889	12
Missouri	.....	12
Nebraska	1890	15
Nevada	1888	11
New Hampshire	1888	10
New Jersey	1888	71
New Mexico	.....	1
New York — State Station	1888	23
New York — Cornell Station	1889	19
North Carolina	1889	72
North Dakota	1888	18

[a] Part I.

Station.	Report for the year.	Bulletin number.
Ohio	1887	6[a]
Oregon	1889	5
Pennsylvania	1888	11
Rhode Island	1890	.....
South Carolina	1888	7
South Dakota	.....	.....
Tennessee	1888	3
Texas	1889	11
Utah	.....	1
Vermont	1888	20
Virginia	.....	.....
West Virginia	1889	6
Wisconsin	1889	24

a Vol. III.

The compilers have also examined all transactions of agricultural societies and reports of state boards of agriculture issued prior to the establishment of experiment stations in the respective States, which were accessible in the Yale University library, as well as the files of the American chemical journals. The bulletins of the Division of Chemistry of the U. S. Department of Agriculture, the reports of the U. S. Department of Agriculture, and the bulletins and reports of the Ontario Agricultural College, and the Central Experiment Station at Ottawa, Canada, have likewise been searched for analyses of feeding stuffs.

Each analysis is designated by number to facilitate cross-reference. The sum of all ingredients as given in a considerable number of analyses was found to be more or less than 100 per cent. If the difference was less than half a per cent this difference has been added to or subtracted from the nitrogen-free extract; if more than half a per cent the analysis has been inserted in the table uncorrected, but with a footnote calling attention to it, and has been excluded from the average.

It has been our aim to limit ourselves quite strictly to mere compilation, thus presenting in the most accessible shape a complete record of the work which has been done in this country in the line of proximate analysis of feeding stuffs, with a reference in every case to the original publication.

It is probable that there was greater divergence in the methods of analysis in this country in former years than there is at present, although it is within our knowledge that analyses made at the Bussey Institution and at the Connecticut Experiment Station at Middletown, beginning in 1875, and at New Haven, beginning in 1877, as well as those made still earlier at New Haven in the Sheffield Scientific School, were all done by the original Weende methods of Henneberg and Stohmann until the methods were modified to accord with those of the Association of Official Agricultural Chemists. These include nearly all the analyses made previous to 1880.

The American Association of Official Agricultural Chemists, which was organized in 1884 and which first took up the consideration of methods of the proximate analysis of feeding stuffs in 1887, has done very much to introduce uniformity into the methods and work of all

laboratories in this country, and it is believed that since 1887 the official methods of the Association have come into use in nearly all our station laboratories. In view of this fact we have aimed to arrange the different analyses of each material in something like chronological order. Other things being equal, the later analyses of different laboratories should be more nearly comparable with each other than the older analyses.

Realizing the difficulties and uncertainties of computing averages from the data collected, we have still felt justified in inserting statements of the average composition of most of the feeding stuffs. Our object has been to supply data which might serve as a help and general guide in practical cattle feeding till further study and more accurate analyses shall provide something better.

It is too much to hope that this work is free from errors. The compilers therefore request that any errors or omissions discovered in it may be reported to them, that such correction as is possible may be made.

Connecticut Agricultural Experiment Station,
New Haven, Connecticut, May 20, 1891.

	Number of analyses.	In fresh or air-dry material.								
		Water.			Ash.			Protein (N×6.25).		
		Minimum.	Maximum.	Average.	Minimum.	Maximum.	Average.	Minimum.	Maximum.	Average.
GRAINS AND OTHER SEEDS—Continued.										
		%	%	%	%	%	%	%	%	%
Corn (maize) kernel—continued.										
Dent, raised in Michigan	7	11.7	14.1	**13.1**	1.3	1.6	**1.4**	9.9	11.8	**11.0**
Dent, raised in Missouri	22	7.4	9.1	**8.2**	1.3	2.1	**1.7**	8.2	12.8	**10.5**
Dent, raised in Texas	19	9.3	12.1	**10.6**	1.0	1.7	**1.4**	9.8	11.0	**10.4**
Dent; raised in Wisconsin	5	13.7	19.4	**17.0**	1.3	2.6	**1.7**	8.7	10.3	**9.4**
Dent, all analyses	86	6.2	19.4	**10.6**	1.0	2.6	**1.5**	7.5	12.8	**10.3**
Flint, raised in Connecticut	11	8.7	18.2	**14.2**	1.0	1.6	**1.3**	8.9	11.6	**10.1**
Flint, raised in Massachusetts	12	8.9	14.4	**11.1**	1.1	1.6	**1.4**	7.9	12.9	**11.1**
Flint, raised in Michigan	4	12.9	13.5	**13.2**	1.4	1.5	**1.5**	10.7	12.0	**11.5**
Flint, raised in New Hampshire	11	8.3	11.5	**10.1**	1.3	1.8	**1.5**	10.5	13.7	**11.6**
Flint, all analyses	68	4.5	19.6	**11.3**	1.0	1.9	**1.4**	7.0	13.7	**10.5**
Sweet, raised in Massachusetts	6	6.3	10.9	**8.7**	1.6	1.9	**1.8**	11.6	14.4	**12.8**
Sweet, raised in Pennsylvania	8	7.0	9.5	**8.0**	1.7	2.4	**2.0**	9.5	11.7	**10.7**
Sweet, all analyses	26	6.0	10.9	**8.8**	1.4	2.4	**1.9**	9.5	15.3	**11.6**
Pop varieties	4	8.6	12.6	**10.7**	1.2	1.7	**1.5**	9.7	13.1	**11.2**
Soft varieties	5	6.1	14.1	**9.3**	1.4	1.9	**1.6**	8.8	14.6	**11.4**
All varieties and analyses	208	4.5	20.7	**10.9**	1.0	2.6	**1.5**	7.0	15.3	**10.5**
Field-cured, dent varieties	17	28.8	39.3	**34.2**	0.7	1.3	**0.9**	4.4	8.3	**6.3**
Small and from immature ears	9	31.2	57.5	**38.9**	0.7	1.2	**0.9**	5.4	8.6	**6.8**
Field-cured, flint varieties	48	22.0	32.1	**27.1**	0.6	1.6	**1.3**	5.6	10.6	**8.0**
Small and from immature ears	7	24.0	74.8	**34.5**	0.4	1.0	**0.8**	3.3	10.3	**7.9**
Sorghum seed	10	9.3	16.8	**12.8**	1.4	4.3	**2.1**	7.7	11.3	**9.1**
Barley	10	7.2	12.6	**10.9**	1.8	3.2	**2.4**	8.6	15.7	**12.4**
Oats	30	8.9	13.5	**11.0**	2.0	3.6	**3.0**	8.0	14.4	**11.8**
Rye	6	8.7	13.2	**11.6**	1.8	1.9	**1.9**	9.5	12.1	**10.6**
Wheat, spring varieties	13	8.1	13.4	**10.4**	1.5	2.6	**1.9**	8.1	15.4	**12.5**
Wheat, winter varieties, raised in—										
Alabama	17	9.4	12.4	**10.9**	1.8	2.4	**2.0**	9.8	13.7	**11.4**
California	4	10.7	11.2	**11.0**	1.5	2.0	**1.8**	8.3	13.8	**11.1**
Colorado	50	7.9	10.6	**9.6**	1.8	3.6	**2.2**	11.2	15.9	**13.3**
Georgia	8	8.0	12.2	**9.9**	1.6	2.3	**1.9**	9.5	14.0	**11.6**
Indiana	8	9.9	12.4	**10.8**	1.4	2.1	**1.8**	11.9	14.5	**13.2**
Maryland	9	8.4	11.9	**10.5**	1.4	2.2	**1.8**	9.8	14.5	**11.7**
Michigan	23	9.1	13.8	**10.8**	1.0	2.1	**1.7**	9.1	15.2	**11.6**
Missouri	12	7.7	13.5	**9.8**	1.6	2.2	**1.9**	10.5	14.0	**11.6**
New Jersey	13	13.3	14.0	**13.7**	1.8	2.2	**2.0**	9.2	12.5	**10.3**
North Carolina	22	8.2	11.7	**10.0**	1.2	1.9	**1.6**	8.9	12.4	**10.4**
Oregon	5	9.0	13.0	**9.9**	1.5	2.0	**1.7**	8.1	10.6	**8.6**
Pennsylvania	41	7.6	13.3	**10.7**	0.8	3.0	**1.6**	9.5	15.6	**11.8**
Tennessee	14	7.1	11.9	**10.2**	1.6	2.4	**1.9**	10.0	16.6	**12.5**
Virginia	11	8.8	12.3	**10.3**	1.1	2.5	**1.7**	10.2	14.0	**12.2**
Wheat, winter varieties, all analyses	262	7.1	14.0	**10.5**	0.8	3.6	**1.8**	8.1	16.6	**11.8**
Wheat, all complete analyses of all varieties	310	7.1	14.0	**10.5**	0.8	3.6	**1.8**	8.1	17.2	**11.9**
Rice	10	11.4	14.0	**12.4**	0.3	0.5	**0.4**	5.9	8.6	**7.4**
Buckwheat	8	10.9	14.8	**12.6**	1.6	2.3	**2.0**	8.6	11.0	**10.0**
Soja bean	8	5.9	19.3	**10.8**	3.1	5.4	**4.7**	26.3	40.2	**34.0**
Cowpea	5	10.0	20.9	**14.8**	2.9	3.4	**3.2**	19.3	23.0	**20.8**
MILL PRODUCTS.										
Corn (maize) meal	77	8.0	27.4	**15.0**	0.9	4.1	**1.4**	7.1	13.9	**9.2**
Corn-and-cob meal	7	9.5	26.3	**15.1**	1.2	1.9	**1.5**	5.8	12.2	**8.5**
Oatmeal	6	6.2	8.8	**7.9**	1.8	2.2	**2.0**	12.9	16.3	**14.7**
Barley meal	3	9.9	13.6	**11.9**	1.6	3.8	**2.6**	9.8	12.7	**10.5**
Rye flour	4	12.4	13.6	**13.1**	0.6	0.8	**0.7**	6.0	6.9	**6.7**
Wheat flour, all analyses	20	8.2	13.6	**12.4**	0.3	0.7	**0.5**	8.6	13.6	**10.8**
Graham flour	3	12.1	13.7	**13.1**	1.7	2.0	**1.8**	11.2	12.4	**11.7**
Buckwheat flour	4	12.8	17.6	**14.6**	0.7	1.3	**1.0**	4.2	8.1	**6.9**

STUFFS, WITH MAXIMA AND MINIMA—Continued.

In fresh or air-dry material.									Calculated to water-free substance.				
Crude fiber.			Nitrogen-free extract.			Fat.			Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.
Minimum.	Maximum.	Average.	Minimum.	Maximum.	Average.	Minimum.	Maximum.	Average.	Average.	Average.	Average.	Average.	Average.
%	%	%	%	%	%	%	%	%	%	%	%	%	%
2.0	2.5	2.3	66.3	69.1	67.4	4.6	5.0	4.8	1.6	12.6	2.6	77.7	5.5
1.4	3.1	2.4	69.8	74.8	71.8	4.3	7.5	5.4	1.9	11.4	2.6	78.2	5.9
1.8	4.8	2.8	66.7	71.4	69.3	5.0	6.6	5.5	1.6	11.6	3.1	77.6	6.1
1.3	2.9	1.8	65.4	68.1	66.3	3.1	4.3	3.8	2.9	11.3	2.1	79.1	4.6
0.9	4.8	2.2	65.4	75.7	70.4	3.1	7.5	5.0	1.7	11.5	2.6	78.6	5.6
0.8	1.5	1.2	65.0	72.3	68.6	3.9	5.7	4.6	1.5	11.8	1.3	80.0	5.4
1.1	2.5	1.9	66.5	74.2	69.8	3.4	5.9	4.7	1.6	12.4	2.1	78.6	5.3
2.0	2.5	2.2	66.0	67.4	66.6	4.8	5.1	5.0	1.7	13.2	2.5	76.8	5.8
0.8	1.3	1.1	67.6	73.3	70.2	4.7	7.1	5.5	1.7	12.8	1.2	78.2	6.1
0.7	2.9	1.7	65.0	76.7	70.1	3.4	7.1	5.0	1.7	11.8	1.9	79.0	5.6
1.6	2.6	2.1	65.5	68.9	67.0	3.8	9.2	7.6	2.0	14.0	2.3	73.4	8.3
3.0	5.2	3.7	62.5	69.1	66.6	7.8	11.9	9.0	2.2	11.6	4.0	72.4	9.8
1.5	5.2	2.8	61.8	72.4	66.8	3.8	11.9	8.1	2.1	12.8	3.1	73.2	8.8
1.2	2.3	1.8	68.4	71.1	69.6	4.2	6.0	5.2	1.7	12.5	2.0	78.0	5.8
1.3	3.3	2.0	66.0	75.5	70.2	5.0	5.7	5.5	1.8	12.5	2.2	77.4	6.1
0.7	5.2	2.1	61.8	76.7	69.6	3.1	11.9	5.4	1.7	11.7	2.4	78.1	6.1
0.9	1.8	1.2	50.3	59.4	53.9	2.9	4.0	3.5	1.3	9.6	1.8	81.9	5.4
0.9	1.1	1.1	33.5	54.1	49.0	1.8	4.3	3.4	1.5	11.1	2.0	80.0	5.4
0.7	1.6	1.3	53.9	64.4	58.1	3.4	5.3	4.2	1.7	10.9	1.8	79.8	5.8
0.3	1.0	0.8	19.9	62.5	52.4	1.4	3.0	3.6	1.3	11.9	1.2	80.6	5.0
1.5	8.7	2.6	59.0	73.6	70.0	2.1	4.6	3.6	2.4	10.4	3.0	80.1	4.1
1.3	4.2	2.7	66.7	73.9	69.8	1.5	3.2	1.8	2.7	13.9	3.0	78.4	2.0
1.5	12.9	9.5	53.5	66.9	59.7	3.4	5.8	5.0	3.4	13.2	10.8	67.0	5.6
1.4	2.1	1.7	71.2	73.9	72.5	1.4	2.1	1.7	2.1	12.0	1.9	82.2	1.9
1.3	2.3	1.8	66.1	78.7	71.2	1.8	2.6	2.2	2.1	13.9	2.0	79.5	2.5
1.3	1.9	1.6	68.5	74.4	71.8	1.6	2.7	2.2	2.2	12.8	1.8	80.7	2.5
1.8	2.2	2.0	70.2	74.8	72.5	1.5	1.8	1.6	2.0	12.5	2.2	81.5	1.8
1.1	2.2	1.6	62.9	74.3	70.9	1.6	3.9	2.4	2.4	14.7	1.9	78.3	2.7
1.4	2.0	1.7	69.6	73.8	72.6	2.1	2.7	2.3	2.1	12.8	1.9	80.7	2.5
1.6	2.4	2.0	69.3	71.9	70.3	1.6	2.3	1.9	1.9	14.6	2.2	79.2	2.1
1.6	2.3	1.7	70.3	74.8	72.2	1.6	2.7	2.1	2.0	13.0	1.9	80.8	2.3
1.1	2.4	1.8	70.6	75.9	72.1	1.3	2.5	2.0	1.9	13.0	2.0	80.9	2.2
1.5	2.7	2.2	70.0	75.2	72.3	1.5	2.4	2.2	2.1	12.8	2.3	80.4	2.4
1.6	2.0	1.8	68.3	72.2	70.6	1.4	1.7	1.6	2.3	11.8	2.1	82.1	1.7
0.4	2.9	1.8	70.9	76.6	73.9	2.0	2.5	2.3	1.8	11.5	2.0	82.1	2.6
1.2	1.9	1.5	74.5	77.5	76.3	1.7	2.3	2.0	1.9	9.5	1.7	84.7	2.2
0.9	2.8	1.7	67.9	76.1	72.2	1.4	2.6	2.0	1.8	13.2	1.9	80.9	2.2
1.5	2.9	2.0	66.7	74.4	71.3	1.7	2.3	2.1	2.1	13.9	2.2	79.5	2.3
1.2	2.0	1.7	69.6	73.7	71.9	1.8	2.6	2.2	1.9	13.6	1.9	80.1	2.5
0.4	2.9	1.8	66.7	77.7	72.0	1.3	3.9	2.1	2.0	13.1	2.0	80.6	2.3
0.4	3.1	1.8	64.8	78.6	71.9	1.3	3.9	2.1	2.0	13.3	2.0	80.4	2.3
0.1	0.4	0.2	77.5	80.6	79.2	0.3	0.6	0.4	0.4	8.5	0.2	90.5	0.4
7.8	9.4	8.7	62.6	65.4	64.5	2.2	2.4	2.2	2.3	11.5	9.9	73.7	2.6
2.5	6.1	4.8	26.2	32.8	28.8	12.3	19.0	16.9	5.3	38.1	5.4	32.2	18.9
3.4	5.0	4.1	50.5	62.0	55.7	1.3	1.6	1.4	3.8	24.4	4.8	65.5	1.7
0.5	3.1	1.9	60.4	74.0	68.7	2.0	5.1	3.8	1.6	10.8	2.2	81.0	4.4
4.7	9.4	6.6	56.8	69.7	64.8	2.5	4.7	3.5	1.7	10.0	7.8	76.4	4.1
0.6	1.2	0.9	66.6	69.0	67.4	6.1	8.8	7.1	2.2	15.9	1.0	73.2	7.7
5.9	7.0	6.5	63.5	68.0	66.3	1.5	3.2	2.2	3.0	11.9	7.3	75.3	2.5
0.4	0.5	0.4	77.6	79.1	78.3	0.8	0.9	0.8	0.8	7.7	0.5	90.1	1.0
0.1	1.0	0.2	71.5	78.5	75.0	0.6	1.8	1.1	0.5	12.3	0.2	85.8	1.2
1.8	2.0	1.9	69.8	70.0	69.8	1.7	1.9	1.7	2.0	13.4	2.2	80.4	2.0
0.2	0.5	0.3	71.1	79.4	75.8	0.7	1.8	1.4	1.2	8.0	0.4	88.8	1.6

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	GREEN FODDER—Continued.													
	CEREAL GRASSES—continued.													
	Corn (maize) fodder, dent varieties:	%	%	%	%	%	%	%	%	%	%	%		
44	Southern White, cut Aug. 23, when tassels began to appear; thin sown. *h*	88.09	0.78	1.06	3.83	6.06	0.18	6.6	8.9	32.2	50.9	1.4	Conn. State (Middletown) Ex. Sta. Rep., 1877–'78, p. 36.	44
45	Southern White, cut Aug. 23, when tassels began to appear; thick sown. *h*	93.60	0.55	0.54	2.22	3.01	0.08	8.6	8.4	34.7	47.0	1.3	....do	45
46	Southern White, cut Sept. 7; thick sown *h*	63.53	2.54	3.79	11.00	18.78	0.36	6.9	10.4	30.2	51.5	1.0	....do	46
47	Green fodder corn	74.85	1.46	1.25	6.35	15.67	0.42	5.8	5.0	25.2	62.3	1.7	N. J. Ex. Sta. Rep., 1881, p. 52	47
48	Do	71.10	1.35	1.56	7.88	17.69	0.42	4.7	5.4	27.3	61.1	1.5	....do	48
49	Do	75.04	1.51	1.75	9.78	11.37	0.55	6.0	7.0	39.2	45.6	2.2	....do	49
50	Do	74.43	1.65	1.72	6.32	15.65	0.23	6.5	6.7	24.7	61.2	0.9	N. J. Ex. Sta. Rep., 1882, p. 71	50
51	Do	73.12	1.70	1.70	6.56	16.63	0.29	6.3	6.3	24.4	61.9	1.1	....do	51
52	Green field corn, planted in hills as for crop of ears. Analysis No. 614 is silage made from this crop.	79.72	1.07	1.78	4.73	12.46	0.24	5.3	8.8	23.3	61.4	1.2	Conn. State Ex. Sta. Rep., 1882, p. 100	52
53	Green fodder corn, thickly planted in drills. Analysis No. 615 is silage made from this crop.	87.15	0.87	1.54	4.19	6.06	0.19	6.8	11.9	32.6	47.2	1.5	....do	53
54	Yellow dent. Analysis No. 619 is silage made from this crop.	84.95	0.78	1.15	3.29	9.32	0.51	5.2	7.6	21.9	61.9	3.4	Rep. of Expts. at Univ. Wis., 1882, p. 85.	54
55	Green fodder corn	71.51	1.42	1.45	6.77	18.50	0.35	5.0	5.1	23.8	64.9	1.2	N. J. Ex. Sta. Rep., 1883, p. 75	55
56	Do	69.11	1.56	1.59	8.12	19.30	0.32	5.1	5.1	26.3	62.5	1.0	....do	56
57	Silage corn, Southern White	80.00	1.10	1.21	6.49	10.71	0.49	5.5	6.0	32.5	53.5	2.5	N. Y. State Ex. Sta. Rep., 1884, p. 39?	57
58	Minnesota, cut Aug. 21, 1884	82.21	0.84	1.83	6.37	8.32	0.43	4.7	10.3	35.8	46.8	2.4	....do	58
59	Husk corn, cut Aug. 22, 1883	82.15	1.09	1.45	5.59	9.20	0.52	6.1	8.1	31.3	51.6	2.9	....do	59
60	Husk corn, cut Aug. 9	81.97	0.87	1.52	5.34	9.49	0.81	4.8	8.4	29.6	52.6	4.5	....do	60
61	Silage corn, Southern White, cut Sept. 5	81.46	1.16	1.02	5.93	9.73	0.70	6.3	5.5	32.0	52.5	3.7	....do	61
62	Green corn	86.71	1.55	2.15	3.50	5.84	0.25	11.7	16.2	26.3	43.9	1.9	N. J. Ex. Sta. Rep., 1884, p. 106	62
63	Do	80.91	1.35	2.15	5.00	10.20	0.39	7.1	11.3	26.2	53.4	2.0	....do	63
64	Do	77.76	1.45	1.76	5.78	12.85	0.40	6.5	7.9	26.0	57.8	1.8	....do	64
65	Do	73.79	1.43	1.86	6.20	16.28	0.44	5.5	7.1	23.7	62.0	1.7	....do	65
66	Green corn, cut Aug. 2; height 5 ft.; drills 3 ft. apart. *a h*	89.36	1.19	0.89	3.45	4.89	0.22	11.2	8.4	32.5	45.9	2.0	Penn. Ex. Sta. Rep., 1887, p. 124	66
67	Green corn, cut Aug 23; height 6 ft.; drills 3 ft. apart. *a h*	83.61	1.16	0.96	5.54	8.41	0.32	7.1	5.9	33.8	53.3	1.9	....do	67
68	Green corn, cut Sept. 13; mature; drills 3 ft. apart. *a h*	80.65	1.03	0.98	5.35	11.63	0.36	5.4	5.1	27.7	60.0	1.8	....do	68

69	Green corn, sown later and more manure used than in the last 3 samples; height 6 ft.; drills 3 ft. apart. *a h*	85.25	1.01	1.29	4.46	7.63	0.36	6.8	8.8	30.2	51.7	2.5	....do	69
70	Minnesota White	73.90	0.88	1.99	4.99	17.76	0.48	3.4	7 6	19.1	68.1	1.8	Minn. Ex. Sta. Bul. 2, 1888	70
71	Minnesota Yellow	62.90	1.09	2.89	10.41	22.08	0.63	2.9	7 8	28.1	59.5	1 7	....do	71
72	Dakota Dent	71.50	0.84	2.53	4.20	20.25	0.68	2.9	8.9	14.7	71.1	2.4	....do	72
73	Pride of the North	73.10	1.00	1.99	4.91	18.56	0.44	3.7	7.	18.3	69.0	1.6	....do	73
74	Leaming	78.20	0.82	1.72	4.36	14.54	0.36	3.8	7.	20.0	66.6	1.7	....do	74
75	Smedley	78.10	0.72	1.77	4.20	14.85	0.36	3.3	8.	19.2	67.8	1.6	....do	75
76	Sheep-Tooth	86.60	0.48	1.05	3.67	8.04	0.16	3.5	7.8	27.4	60.1	1.2	....do	76
77	Southern Ensilage No. 1	83.40	0.61	1.20	3.76	10.89	0.14	3.6	7.2	22.7	65.7	0.8	....do	77
78	Southern Ensilage No. 2 *b h i j*	79.40	1.25	1.44	5.46	12.29	0.16	6.	7.0	26.5	59.6	0.8	....do	78
79	Southern Ensilage, cut Sept. 16 *b h i j*	75.40	1.13	2.36	5.95	14.58	0.58	4.	9.6	24.	59.3	2.3	N. H. Ex. Sta. Bul. 1, 1888	79
80	Pride of the North, cut Sept. 16	70.45	1.77	3.25	6.04	16.90	1.59	6.	11.0	20.4	57.2	5.4	....do	80
81	Pride of the North, well matured *a h*	71.00	2.22	2.49	7.82	15.98	0.49	7	8.6	26.9	55.1	1.7	Wis. Ex. Sta. Rep., 1888, pp. 8 and 85	81
82	Burrill & Whitman Southern Ensilage; planted 6 to 8 inches apart; drills 3 feet 10 inches apart; cut Aug. 15; stalks in tassel, but ears just coming into milk. *a*	82.30	1.59	1.81	6.80	7.22	0.28	9.0	10.2	38.4	40.8	1.6	....do	82
83	Burrill & Whitman Southern Ensilage, cut Aug. 31.	74.31	1.39	1.76	6.60	15.22	0.72	5.4	6.8	25.	59.3	2.8	....do	83
84	Breck Ensilage corn; rows 3 feet apart; drilled 20 quarts seed per acre; cut when glazed. *a h i j*	78.75	1.21	1.07	7.62	10.14	1.21	5.7	5.0	35.	47.7	5.7	Md. Ex. Sta. Bul. 3, 1888	84
85	Breck Ensilage corn; rows 18 inches apart; drilled 36 quarts seed per acre; cut before glazing. *a h i j*	80.18	0.94	1.02	6.22	10.54	1.10	4.7	5.1	31.4	53.2	5.6	....do	85
86	Breck Ensilage corn; rows 9 inches apart; drilled 52 quarts seed per acre; cut before glazing. *a h i j*	79.67	1.04	1.13	7.20	9.87	1.09	5.1	5.6	35.4	48.5	5.4	....do	86
87	Breck Ensilage corn; broadcast; drilled 52 quarts seed per acre; cut before glazing. *a h i j*	77.93	1.09	1.83	7.85	10.48	0.82	4.9	8.3	35.6	47.5	3.7	....do	87
88	Rose Dent, well-manured land; rows 3 feet apart; stalks 2 to the foot; cut in milk. *h*	78.50	1.53	1.67	3.51	14.01	0.78	7.1	7.8	16.3	65.2	3.6	Minn. Ex. Sta. Bul. 7, 1889	88
89	Burr White Dent; rows 3 feet 8 inches apart; 1 to 3 kernels every 8 inches; kernels glazed; leaves dry at bottom. *a h*	59.54	1.76	1.93	8.46	27.04	1.27	4.5	4.2	24.6	63.9	2.8	Ill. Ex. Sta. Bul. 4, 1889	89
90	Burrill & Whitman Ensilage; rows 3 feet 8 inches apart; 1 kernel every 3 inches; kernels in milk; leaves green. *a h*	72.66	1.22	1.47	6.44	17.36	0.85	4.4	4.	24.5	63.3	3.0	....do	90
91	Burrill & Whitman Ensilage; rows 3 feet 9 inches apart; stalks 10 inches apart; cut Aug. 25. *a*	82.75	2.12	2.75	8.49	3.27	0.62	7.8	10.	31.1	48.7	2.3	Mich. Ex. Sta., Bul. 49, 1889	91
92	Burrill & Whitman Ensilage; rows 3 feet 9 inches apart; stalks 10 inches apart; cut Sept. 3. *a*	78.30	1.34	2.36	5.01	11.54	0.55	6.2	10.9	27.2	53.2	2.5	....do	92
93	Burrill & Whitman Ensilage; rows 3 feet 9 inches apart; stalks 10 inches apart; cut Sept. 10. *a*	78.02	1.23	2.02	6.26	12.00	0.47	5.6	9.2	28.5	54.6	2.1	....do	93

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	GREEN FODDER—Continued.													
	GRASSES—continued.													
	Yellow oat grass (*Avena flavescens*), grown on same soil:	%	%	%	%	%	%	%	%	%	%	%		
217	Cut June 16, 1888; in full bloom *a b*	66.70	1.38	2.55	11.39	17.20	0.78	4.1	7.7	34.2	51.7	2.3	Conn. State Ex. Sta. Rep., 1888, p. 101	217
218	Cut June 16, 1889; in full bloom *a b*	70.11	1.71	1.91	10.06	15.46	0.74	5.7	6.4	33.7	51.7	2.5	Conn. State Ex. Sta. Rep., 1889, p. 248	218
	Average	68.40	1.54	2.23	10.73	16.34	0.76	4.9	7.1	33.9	51.7	3.4		
	Erect brome grass (*Bromus erectus*):													
219	Cut Apr. 27; very young *a*	85.50	1.25	2.28	3.87	6.57	0.53	8.6	15.7	26.7	45.3	3.7	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 135.	219
220	Cut May 8, before bloom *a*	74.30	1.86	3.14	6.49	13.37	0.84	7.2	12.2	25.3	52.0	3.3	....do	220
221	Cut May 12, before bloom *a*	72.20	2.06	3.06	6.81	14.84	1.03	7.4	11.0	24.5	53.4	3.7	....do	221
222	Cut May 19, early bloom *a*	63.70	2.79	3.19	8.90	20.40	1.02	7.7	8.8	24.5	56.2	2.8	....do	222
	Schrader's grass, rescue grass (*Bromus unioloides*):													
223	Cut April 23; panicle not out *a*	80.60	2.07	3.31	3.60	9.45	0.97	10.7	17.1	18.6	48.6	5.0	....do	223
224	Cut May 4; panicle closed *a*	75.40	2.20	3.53	5.47	12.55	0.85	8.9	14.3	22.2	51.1	3.5	....do	224
225	Cut May 13, in full bloom *a*	79.40	1.91	2.60	4.67	10.60	0.82	9.3	12.6	22.7	51.4	4.0	....do	225
226	Cut June 1, after bloom *a*	67.50	2.17	3.52	8.23	17.81	0.77	6.7	10.8	25.3	54.8	2.4	....do	226
227	Cut June 1, in seed; brown *a*	64.70	3.02	3.45	7.01	21.08	0.74	8.6	9.8	19.9	59.6	2.1	....do	227
	Orchard grass (*Dactylis glomerata*):													
228	Cut Apr. 23; panicle not out; earlier growth *a*	78.80	2.18	3.39	3.98	10.78	0.87	10.3	16.0	18.8	50.8	4.1	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 134.	228
229	Cut May 4; panicle closed; earlier growth *a*	79.30	1.71	2.15	4.80	11.40	0.64	8.3	10.4	23.2	55.0	3.1	....do	229
230	Cut May 13; in full bloom; earlier growth *a*	77.30	1.83	2.16	5.77	12.20	0.74	8.1	9.5	25.4	53.8	3.2	....do	230
231	Cut June 1; after bloom; earlier growth *a*	73.50	2.39	2.19	7.22	13.95	0.75	9.0	8.3	27.3	52.6	2.8	....do	231
232	Cut June 18; in bloom; later growth *a*	66.90	2.86	4.14	8.16	16.62	1.32	8.6	12.5	24.7	52.2	4.0	....do	232
233	Cut June 23; late bloom; later growth *a*	60.20	2.39	3.43	9.72	22.82	1.44	6.0	8.6	24.4	57.4	3.6	....do	233
234	Cut July 1; seed nearly ripe; later growth *a*	62.30	2.54	2.75	9.46	21.69	1.26	6.7	7.3	25.1	57.6	3.3	....do	234
235	Cut June 12; head not out; first year's growth. *a*	79.50	2.36	2.65	4.23	9.85	1.41	11.5	12.9	20.6	48.1	6.9	....do	235
236	Cut July 15; green; first year's growth *a*	72.30	2.91	3.89	6.00	13.00	1.90	10.5	14.0	21.6	47.0	6.9	....do	236
237	Cut July 15; yellow; first year's growth *a*	74.60	2.58	2.31	5.70	13.30	1.51	10.1	9.1	22.4	52.4	6.0	....do	237
238	Cut Oct. 25; first year's growth *a*	68.70	3.43	4.17	6.65	15.02	2.03	11.0	13.3	21.2	48.0	6.5	....do	238
239	Aftermath	76.25	2.60	2.97	7.60	9.23	1.35	10.9	12.2	32.0	39.2	5.7	N. Y. State Ex. Sta. Rep., 1885, p. 302	239

240	Cut 1886	65.00	1.99	2.58	12.54	16.73	1.16	5.7	7.4	35.8	47.8	3.3	N. Y. State Ex. Sta. Rep., 1886, p. 365....	240
241	Cut 1887, grown on same soil as 240	73.19	1.84	2.40	10.54	10.87	1.14	6.9	8.9	39.4	40.5	4.3	N. Y. State Ex. Sta. Rep., 1887, p. 407....	241
242	Aftermath	70.90	2.11	2.76	10.14	12.87	1.22	7.3	9.5	34.9	44.1	4.2	N. Y. State Ex. Sta. Rep., 1888, p. 237....	242
243	Cut June 11, 1888; in full bloom *a b*	77.74	1.56	2.24	7.81	9.92	0.73	7.0	10.1	35.1	44.6	3.2	Conn. State Ex. Sta. Rep., 1888, p. 101 ...	243
244	Cut June 10, 1889; in full bloom *a b*	69.86	1.75	1.92	11.11	14.55	0.81	5.8	6.4	36.9	48.2	2.7	Conn. State Ex. Sta. Rep., 1889, p. 248 ...	244
	Four analyses in full bloom.* Maximum	77.30	2.86	4.14	11.11	16.62	1.32	8.1	10.1	36.9	57.3	3.6		
	Four analyses in full bloom.* Minimum	66.90	1.56	1.92	5.77	9.92	0.73	5.8	6.4	24.4	44.6	2.7		
	Four analyses in full bloom.* Average	**72.95**	**2.00**	**2.61**	**8.21**	**13.33**	**0.90**	**7.4**	**9.6**	**30.4**	**49.3**	**3.3**		
	Sheep's fescue (*Festuca ovina*):													
245	Cut April 27, very young *a*	70.00	1.94	4.47	6.09	16.21	1.29	6.5	14.9	20.3	54.0	4.3	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 136.	245
246	Cut May 8, before bloom *a*	65.40	1.87	3.03	8.69	19.76	1.25	5.4	8.8	25.1	57.1	3.6	....do	246
247	Cut May 12, before bloom *a*	67.00	1.98	3.13	8.47	18.29	1.13	6.0	9.5	25.7	55.4	3.4	....do	247
248	Cut May 21, in bloom *a*	53.70	2.59	4.58	11.02	26.95	1.16	5.6	9.9	23.8	58.2	2.5	....do	248
249	Cut June 1, after bloom *a*	53.90	3.03	4.29	11.05	26.32	1.41	6.6	9.3	24.0	57.0	3.1	....do	249
250	Cut May 21 *a*	67.00	1.85	3.26	7.85	19.21	0.83	5.6	9.9	23.8	58.2	2.5	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 127.	250
251	Cut in bloom; grown under evergreens	71.85	1.85	2.91	9.98	12.68	0.73	6.6	10.3	35.5	45.0	2.6	Conn. State Ex. Sta. Rep., 1887, p. 103 ...	251
252	Meadow fescue (*Festuca pratensis*)	68.70	1.97	2.44	10.93	14.82	1.14	6.3	7.8	34.9	47.4	3.6	N. Y. State Ex. Sta. Rep., 1886, p. 365....	252
253	Cut June 20, in full bloom *a b*	69.89	1.81	2.73	10.53	14.24	0.80	6.0	9.1	35.0	47.3	2.6	Conn. State Ex. Sta. Rep., 1888, p. 101 ...	253
254	Cut June 20, 1888, in full bloom	67.62	1.86	2.69	11.34	15.72	0.77	5.7	8.3	35.0	48.6	2.4	....do	254
255	Cut June, 1889, in full bloom; grown on same soil as 254 *a b*.	73.18	1.58	1.84	10.19	12.55	0.66	5.9	6.9	38.0	46.7	2.5	Conn. State Ex. Sta. Rep., 1889, p. 248 ...	255
	Maximum	73.18	1.97	2.86	11.34	15.72	1.14	6.3	9.1	38.0	48.6	3.6		
	Minimum	67.62	1.58	1.84	10.19	12.55	0.66	5.7	6.9	34.9	46.7	2.4		
	Average	**69.85**	**1.81**	**2.42**	**10.75**	**14.33**	**0.84**	**6.0**	**8.0**	**35.7**	**47.5**	**2.8**		
	Velvet grass, mesquite, soft grass (*Holcus lanatus*):													
256	Cut Apr. 2, very young *a*	82.30	1.77	2.19	3.30	9.64	0.81	10.0	12.4	18.6	54.5	4.5	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 136.	256
257	Cut May 25, late bloom *a*	50.60	4.07	3.63	12.35	27.43	1.92	8.2	7.4	25.0	55.5	3.9	....do	257
	English rye grass (*Lolium perenne*):													
258	Cut May 1, head invisible *a*	78.60	1.85	2.50	3.94	12.35	0.76	8.7	11.7	18.4	57.6	3.6	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 137.	258
259	Cut May 4, head invisible *a*	82.40	1.67	2.31	3.27	9.69	0.76	9.5	13.1	18.0	55.1	4.3	....do	259
260	Cut May 4, head well out *a*	74.00	2.07	2.89	5.34	14.71	0.94	8.0	11.1	20.6	56.7	3.6	....do	260
261	Cut May 12, before bloom *a*	76.40	1.98	2.12	5.65	12.96	0.89	8.4	9.0	23.9	55.0	3.7	....do	261
262	Cut June 1, after bloom	63.10	2.77	2.81	9.38	20.97	0.97	7.5	7.6	25.4	56.9	2.6	....do	262
	Italian rye grass (*Lolium perenne*, var. *italicum*):													
263	Cut Apr. 27, head invisible *a*	82.30	2.35	3.83	3.22	7.45	0.85	13.3	21.6	18.2	42.0	4.9	....do	263
264	Cut May 21, head just out *a*	82.70	1.97	2.48	3.76	8.43	0.66	12.7	14.3	17.0	49.6	6.4	....do	264
265	Cut May 26, in full bloom *a*	78.00	2.42	3.19	4.49	11.39	0.51	11.0	14.5	20.4	51.8	2.3	....do	265

*Nos. 230, 232, 243, 244.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	GREEN FODDER—Continued.													
	CEREAL GRASSES—continued.													
	Corn (maize) fodder, dent varieties:	%	%	%	%	%	%	%	%	%	%	%		
44	Southern White, cut Aug. 23, when tassels began to appear; thin sown. *h*	88.09	0.78	1.06	3.83	6.06	0.18	6.6	8.9	32.2	50.9	1.4	Conn. State (Middletown) Ex. Sta. Rep., 1877–'78, p. 36.	44
45	Southern White, cut Aug. 23, when tassels began to appear; thick sown. *h*	93.60	0.55	0.54	2.22	3.01	0.08	8.6	8.4	34.7	47.0	1.3	....do	45
46	Southern White, cut Sept. 7; thick sown *h*	63.53	2.54	3.79	11.00	18.78	0.36	6.9	10.4	30.2	51.5	1.0	....do	46
47	Green fodder corn	74.85	1.46	1.25	6.35	15.67	0.42	5.8	5.0	25.2	62.3	1.7	N. J. Ex. Sta. Rep., 1881, p. 52	47
48	Do	71.10	1.35	1.56	7.88	17.69	0.42	4.7	5.4	27.3	61.1	1.5	....do	48
49	Do	75.04	1.51	1.75	9.78	11.37	0.55	6.0	7.0	39.2	45.6	2.2	....do	49
50	Do	74.43	1.65	1.72	6.32	15.65	0.23	6.5	6.7	24.7	61.2	0.9	N. J. Ex. Sta. Rep., 1882, p. 71	50
51	Do	73.12	1.70	1.70	6.56	16.63	0.29	6.3	6.3	24.4	61.9	1.1	....do	51
52	Green field corn, planted in hills as for crop of ears. Analysis No. 614 is silage made from this crop.	79.72	1.07	1.78	4.73	12.46	0.24	5.3	8.8	23.3	61.4	1.2	Conn. State Ex. Sta. Rep., 1882, p. 100	52
53	Green fodder corn, thickly planted in drills. Analysis No. 615 is silage made from this crop.	87.15	0.87	1.54	4.19	6.06	0.19	6.8	11.9	32.6	47.2	1.5	....do	53
54	Yellow dent. Analysis No. 619 is silage made from this crop.	84.95	0.78	1.15	3.29	9.32	0.51	5.2	7.6	21.9	61.9	3.4	Rep. of Expts. at Univ. Wis., 1882, p. 85.	54
55	Green fodder corn	71.51	1.42	1.45	6.77	18.50	0.35	5.0	5.1	23.8	64.9	1.2	N. J. Ex. Sta. Rep., 1883, p. 75	55
56	Do	69.11	1.56	1.59	8.12	19.30	0.32	5.1	5.1	26.3	62.5	1.0	....do	56
57	Silage corn, Southern White	89.00	1.10	1.21	6.49	10.71	0.49	5.5	6.0	32.5	53.5	2.5	N. Y. State Ex. Sta. Rep., 1884, p. 39	57
58	Minnesota, cut Aug. 21, 1884	82.21	0.84	1.83	6.37	8.32	0.43	4.7	10.3	35.8	46.8	2.4	....do	58
59	Husk corn, cut Aug. 22, 1883	82.15	1.09	1.45	5.59	9.20	0.52	6.1	8.1	31.3	51.6	2.9	....do	59
60	Husk corn, cut Aug. 9	86.97	0.87	1.52	5.31	9.49	0.81	4.8	8.4	29.6	52.6	4.5	....do	60
61	Silage corn, Southern White, cut Sept. 5	81.46	1.16	1.02	5.93	9.73	0.70	6.3	5.5	32.0	52.5	3.7	....do	61
62	Green corn	86.71	1.55	2.15	3.50	5.84	0.25	11.7	16.2	26.3	43.9	1.9	N. J. Ex. Sta. Rep., 1884, p. 106	62
63	Do	80.91	1.35	2.15	5.00	10.20	0.39	7.1	11.3	26.2	53.4	2.0	....do	63
64	Do	77.76	1.45	1.76	5.78	12.85	0.40	6.5	7.9	26.0	57.8	1.8	....do	64
65	Do	73.79	1.43	1.86	6.20	16.28	0.44	5.5	7.1	23.7	62.0	1.7	....do	65
66	Green corn, cut Aug. 2; height 5 ft.; drills 3 ft. apart. *a h*	89.36	1.19	0.89	3.45	4.89	0.22	11.2	8.4	32.5	45.9	2.0	Penn. Ex. Sta. Rep., 1887, p. 124	66
67	Green corn, cut Aug 23; height 6 ft.; drills 3 ft. apart. *a h*	83.61	1.16	0.96	5.54	8.41	0.32	7.1	5.9	33.8	53.3	1.9	....do	67
68	Green corn, cut Sept. 13; mature; drills 3 ft. apart. *a h*	80.65	1.03	0.98	5.35	11.63	0.36	5.4	5.1	27.7	60.0	1.8	....do	68

69	Green corn, sown later and more manure used than in the last 3 samples; height 6 ft.; drills 3 ft. apart. *a h*	85.25	1.01	1.29	4.46	7.63	0.36	6.8	8.8	30.2	51.7	2.5	....do....	69
70	Minnesota White	73.90	0.88	1.99	4.99	17.76	0.48	3.	7.6	19.1	68.1	1.8	Minn. Ex. Sta. Bul. 2, 1888	70
71	Minnesota Yellow	62.90	1.09	2.89	10.41	22.08	0.63	2.	7.8	28.1	59.5	1.7	....do....	71
72	Dakota Dent	71.50	0.84	2.53	4.20	20.25	0.68	2.	8.9	14.7	71.1	2.4	....do....	72
73	Pride of the North	73.10	1.00	1.99	4.91	18.56	0.44	3.	7.4	18.3	69.0	1.6	....do....	73
74	Leaming	78.20	0.82	1.72	4.36	14.54	0.36	3.8	7.9	20.0	66.6	1.7	....do....	74
75	Smedley	78.10	0.72	1.77	4.20	14.85	0.36	3.	8.1	19.2	67.8	1.6	....do....	75
76	Sheep-Tooth	86.60	0.48	1.05	3.67	8.04	0.16	3.5	7.8	27.4	60.1	1.2	....do....	76
77	Southern Ensilage No. 1	83.40	0.61	1.20	3.76	10.89	0.14	3.6	7.2	22.	65.7	0.8	....do....	77
78	Southern Ensilage No. 2 *b h i j*	79.40	1.25	1.44	5.46	12.29	0.16	6.1	7.0	26.	59.6	0.8	....do....	78
79	Southern Ensilage, cut Sept. 16 *b h i j*	75.40	1.13	2.36	5.95	14.58	0.58	4.6	9.6	24.	59.3	2.3	N. H. Ex. Sta. Bul. 1, 1888	79
80	Pride of the North, cut Sept. 16	70.45	1.77	3.25	6.04	16.90	1.59	6.0	11.0	20.4	57.2	5.4	....do....	80
81	Pride of the North, well matured *a h*	71.00	2.22	2.49	7.82	15.98	0.49	7	8.	26.9	55.1	1.7	Wis. Ex. Sta. Rep., 1888, pp. 8 and 85	81
82	Burrill & Whitman Southern Ensilage; planted 6 to 8 inches apart; drills 3 feet 10 inches apart; cut Aug. 15; stalks in tassel, but ears just coming into milk. *a*	82.30	1.59	1.81	6.80	7.22	0.28	9.0	10.2	38.4	40.8	1.6	....do....	82
83	Burrill & Whitman Southern Ensilage, cut Aug. 31.	74.31	1.39	1.76	6.60	15.22	0.72	5.4	6.	25.7	59.3	2.8	....do....	83
84	Breck Ensilage corn; rows 3 feet apart; drilled 20 quarts seed per acre; cut when glazed. *a h i j*	78.75	1.21	1.07	7.62	10.14	1.21	5.7	5.	35.9	47.7	5.7	Md. Ex. Sta. Bul. 3, 1888	84
85	Breck Ensilage corn; rows 18 inches apart; drilled 36 quarts seed per acre; cut before glazing. *a h i j*	80.18	0.94	1.02	6.22	10.54	1.10	4.7	5.	31.4	53.2	5.6	....do....	85
86	Breck Ensilage corn; rows 9 inches apart; drilled 52 quarts seed per acre; cut before glazing. *a h i j*	79.67	1.04	1.13	7.20	9.87	1.09	5.1	5.	35.4	48.5	5.4	....do....	86
87	Breck Ensilage corn; broadcast; drilled 52 quarts seed per acre; cut before glazing. *a h i j*	77.93	1.09	1.83	7.85	10.48	0.82	4.9	8.	35.6	47.5	3.7	....do....	87
88	Rose Dent, well-manured land; rows 3 feet apart; stalks 2 to the foot; cut in milk. *h*	78.50	1.53	1.67	3.51	14.01	0.78	7 1	7.8	16.3	65.2	3.6	Minn. Ex. Sta. Bul. 7, 1889	88
89	Burr White Dent; rows 3 feet 8 inches apart; 1 to 3 kernels every 8 inches; kernels glazed; leaves dry at bottom. *a h*	59.54	1.76	1.93	8.46	27.04	1.27	4.5	4.2	24.6	63.9	2.8	Ill. Ex. Sta. Bul. 4, 1889	89
90	Burrill & Whitman Ensilage; rows 3 feet 8 inches apart; 1 kernel every 3 inches; kernels in milk; leaves green. *a h*	72.66	1.22	1.47	6.44	17.36	0.85	4.	4.8	24.5	63.3	3.0	....do....	90
91	Burrill & Whitman Ensilage; rows 3 feet 9 inches apart; stalks 10 inches apart; cut Aug. 25. *a*	82.75	2.12	2.75	8.49	3.27	0.62	7 8	10.1	31.1	48.7	2.3	Mich. Ex. Sta., Bul. 49, 1889	91
92	Burrill & Whitman Ensilage; rows 3 feet 9 inches apart; stalks 10 inches apart; cut Sept. 3. *a*	78.30	1.34	2.36	5.91	11.54	0.55	6.2	10.9	27 2	53.2	2.5	....do....	92
93	Burrill & Whitman Ensilage; rows 3 feet 9 inches apart; stalks 10 inches apart; cut Sept. 10. *a*	78.02	1.23	2.02	6.26	12.00	0.47	5.6	9.2	28.5	54.6	2.1	....do....	93

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	GREEN FODDER—Continued.													
	GRASSES—continued.													
	Yellow oat grass (*Avena flavescens*), grown on same soil:	%	%	%	%	%	%	%	%	%	%	%		
217	Cut June 16, 1888; in full bloom *a b*	66.70	1.38	2.55	11.39	17.20	0.78	4.1	7.7	34.2	51.7	2.3	Conn. State Ex. Sta. Rep., 1888, p. 101	217
218	Cut June 16, 1889; in full bloom *a b*	70.11	1.71	1.91	10.06	15.46	0.74	5.7	6.4	33.7	51.7	2.5	Conn. State Ex. Sta. Rep., 1889, p. 248	218
	Average	**68.40**	**1.54**	**2.23**	**10.73**	**16.34**	**0.76**	**4.9**	**7.1**	**33.9**	**51.7**	**3.4**		
	Erect brome grass (*Bromus erectus*):													
219	Cut Apr. 27; very young *a*	85.50	1.25	2.28	3.87	6.57	0.53	8.6	15.7	26.7	45.3	3.7	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 135.	219
220	Cut May 8, before bloom *a*	74.30	1.86	3.14	6.49	13.37	0.84	7.2	12.2	25.3	52.0	3.3	....do	220
221	Cut May 12, before bloom *a*	72.20	2.06	3.06	6.81	14.84	1.03	7.4	11.0	24.5	53.4	3.7	....do	221
222	Cut May 19, early bloom *a*	63.70	2.79	3.19	8.90	20.40	1.02	7.7	8.8	24.5	56.2	2.8	....do	222
	Schrader's grass, rescue grass (*Bromus unioloides*):													
223	Cut April 23; panicle not out *a*	80.60	2.07	3.31	3.60	9.45	0.97	10.7	17.1	18.6	48.6	5.0	....do	223
224	Cut May 4; panicle closed *a*	75.40	2.20	3.53	5.47	12.55	0.85	8.9	14.3	22.2	51.1	3.5	....do	224
225	Cut May 13, in full bloom *a*	70.40	1.91	2.60	4.67	10.60	0.82	9.3	12.6	22.7	51.4	4.0	....do	225
226	Cut June 1, after bloom *a*	67.50	2.17	3.52	8.23	17.81	0.77	6.7	10.8	25.3	54.8	2.4	....do	226
227	Cut June 1, in seed; brown *a*	64.70	3.02	3.45	7.01	21.08	0.74	8.6	9.8	19.9	59.6	2.1	....do	227
	Orchard grass (*Dactylis glomerata*):													
228	Cut Apr. 23; panicle not out; earlier growth *a*	78.80	2.18	3.39	3.98	10.78	0.87	10.3	16.0	18.8	50.8	4.1	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 134.	228
229	Cut May 4; panicle closed; earlier growth *a*	79.30	1.71	2.15	4.80	11.46	0.64	8.3	10.4	23.2	55.0	3.1	....do	229
230	Cut May 13; in full bloom; earlier growth *a*	77.30	1.83	2.16	5.77	12.20	0.74	8.1	9.5	25.4	53.8	3.2	....do	230
231	Cut June 1; after bloom; earlier growth *a*	73.50	2.39	2.19	7.22	13.95	0.75	9.0	8.3	27.3	52.6	2.8	....do	231
232	Cut June 18; in bloom; later growth *a*	66.90	2.86	4.14	8.16	16.62	1.32	8.6	12.5	24.7	52.2	4.0	....do	232
233	Cut June 23; late bloom; later growth *a*	60.20	2.39	3.43	9.72	22.82	1.44	6.0	8.6	24.4	57.4	3.6	....do	233
234	Cut July 1; seed nearly ripe; later growth *a*	62.30	2.54	2.75	9.46	21.69	1.26	6.7	7.3	25.1	57.6	3.3	....do	234
235	Cut June 12; head not out; first year's growth. *a*	79.50	2.36	2.65	4.23	9.85	1.41	11.5	12.9	20.6	48.1	6.9	....do	235
236	Cut July 15; green; first year's growth *a*	72.30	2.91	3.89	6.00	13.00	1.90	10.5	14.0	21.6	47.0	6.9	....do	236
237	Cut July 15; yellow; first year's growth *a*	74.60	2.58	2.31	5.70	13.30	1.51	10.1	9.1	22.4	52.4	6.0	....do	237
238	Cut Oct. 25; first year's growth *a*	68.70	3.43	4.17	6.65	15.02	2.03	11.0	13.3	21.2	48.0	6.5	....do	238
239	Aftermath	76.25	2.60	2.97	7.60	9.23	1.35	10.9	12.2	32.0	39.2	5.7	N. Y. State Ex. Sta. Rep., 1885, p. 302	239

652	Variety unknown	64.42	1.74	2.82	7.18	22.24	1.58	4.9	7.9	20.2	62.5	4.5	Ill. Ex. Sta. Bul. 2, 1888, p. 21	652
653	Do. *a*	74.94	2.61	2.04	7.51	12.26	0.64	10.4	8.1	30.0	48.9	2.5	La. Ex. Sta. Bul. 17, 1888, p. 131	653
654	Stowell Evergreen corn, cut and put into silo when kernels were just past the milk.	78.88	1.33	1.89	5.44	11.77	0.69	6.3	8.9	25.8	55.7	3.3	Mass. State Ex. Sta. Rep., 1888, p. 86	654
655	Southern White, cut and put into silo when kernels were just past the milk.	83.48	0.71	1.14	5.83	8.30	0.54	4.	6.9	35.3	50.2	3.3	....do	655
656	Variety unknown	77.24	1.12	2.20	4.70	14.02	0.72	4.	9.7	20.7	61.5	3.2	Mass. State Ex. Sta. Rep., 1888, p. 37	656
657	Southern White, cut when tassels began to appear.	79.19	2.01	1.58	7.61	8.83	0.78	9.6	7.6	36.6	42.4	3.8	Reference unknown	657
658	Used in feeding experiments. *a*	77.94	1.71	1.92	5.92	11.71	0.80	7	8.7	26.8	53.2	3.6	Wis. Ex. Sta. Rep., 1888, p. 31	658
659	Yellow dent, well preserved, sweet *a* †	74.13	1.86	2.98	5.57	14.10	1.36	7.2	11.5	21.5	54.5	5.3	Wis. Ex. Sta. Rep., 1888, p. 85	659
660	Yellow dent, average of 6 samples taken Nov. 3 to Dec. 30; silage of No. 81; quality good in first sample, poor in last. *a* †	70.62	2.59	2.70	9.68	13.69	0.72	8.8	9.2	32.9	46.7	2.4	....do	660
661	Yellow dent, dry silage; average of 4 samples taken Jan. 27 to Mar. 8; silage of No. 741; quality fair to good. *a* †	30.76	4.38	6.18	21.48	35.84	1.36	6.3	8.9	31.0	51.8	2.0	....do	661
662	Wisconsin White Dent, quality very good *a* †	78.45	1.84	1.86	5.83	11.02	1.00	8.5	8.	27.0	51.3	4.6	....do	662
663	Wisconsin White Dent, sweet; ¾ maize, ¼ rye straw. *a* †	80.55	1.41	2.11	7.24	7.46	1.23	7.2	10.	37.2	38.4	6.4	....do	663
664	Large, sweet corn; average of 5 samples taken Nov. 16 to Jan. 12; silage of Nos. 129, 130; very fine, aromatic. *a* †	77.94	2.02	1.90	5.87	11.48	0.79	9.2	8.6	26.6	52.0	3.6	....do	664
665	Large, sweet corn; average of 5 samples taken Feb. 7 to Mar. 5; silage of No. 131; quality good in first sample, poor in last. *a* †	68.32	3.33	2.87	9.35	14.98	1.25	10.5	9.0	29.4	47.1	4.0	....do	665
666	Southern Sweet (Sheep-Tooth); put into silo Sept. 8, taken out Feb. 15; corn planted too thick for development of many ears; pleasant odor; relished by cattle. *a* †	73.85	3.11	3.62	7.65	11.25	0.52	11.9	13.9	29.2	43.0	2.0	....do	666
667	Burrill & Whitman Southern Ensilage; average of 5 samples taken Jan. 14 to Feb. 15; silage of No. 82; quality very good. *a* †	82.07	1.83	1.73	6.89	6.23	0.65	10.6	9.9	39.7	36.1	3.7	....do	667
668	Burrill & Whitman Southern Ensilage; put into silo Aug. 29 to Sept. 6 without cutting; average of 2 samples taken Mar. 12 and Apr. 2; silage of No. 82; quality very best. *a* †	82.72	1.87	1.39	6.94	6.29	0.79	10.8	8.1	40.2	36.3	4.6	....do	668
669	Burrill & Whitman Southern Ensilage; put into silo Sept. 9 to 16 after cutting; taken out Feb. 15; kept perfectly, no waste. *a* †	79.90	1.48	2.66	6.82	7.76	1.38	7.4	13.2	33.9	38.6	6.9	....do	669
670	Variety unknown	80.50	1.26	1.62	3.63	12.45	0.54	6.5	8.3	18.7	63.7	2.8	N. Y. State Ex. Sta. Rep., 1888, p. 237	670
	Burrill & Whitman Southern Ensilage dent, wilted:													
671	Cut Aug. 25 *a*‡	81.00	1.29	1.91	5.84	9.06	0.90	6.8	10.1	30.7	47.7	4.7	Mich. Ex. Sta. Bul. 49, 1889	671
672	Cut Sept. 1 *a*‡	77.70	1.68	2.05	6.32	11.26	0.99	7.5	9.2	28.3	50.5	4.5	....do	672
673	Cut Sept. 8 *a*‡	78.68	1.27	1.58	6.33	11.32	0.82	6.0	7.4	29.7	53.1	3.8	....do	673

* 2.00 sand and clay. † In *loc. cit.*, lactic and acetic acid given. ‡ Plant in rows 3 feet 9 inches apart; stalks 10 inches apart.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	GREEN FODDER—Continued.													
	LEGUMES—continued.													
	Red clover (*Trifolium pratense*)—Continued.	%	%	%	%	%	%	%	%	%	%	%		
417	Cut Apr. 19; flower head invisible *a**	82.80	1.60	4.56	1.89	7.84	1.31	9.3	26.5	11.0	45.6	7.6	U. S. Dept. Agr. Rep., 1880, p. 151	417
418	Cut May 4; flower head well formed *a**	82.70	1.54	4.38	2.25	8.13	1.00	8.9	25.5	13.1	46.7	5.8	do	418
419	Cut May 10; in full bloom *a**	79.90	1.67	3.85	3.20	10.42	0.96	8.3	19.1	15.9	51.9	4.8	do	419
420	Cut June 1; after bloom *a**	74.20	1.87	4.67	5.14	12.93	1.19	7.3	18.1	19.9	50.1	4.6	do	420
421	Cut June 8; in seed *a**	73.90	1.92	3.98	4.98	14.18	1.04	7.4	15.2	19.1	54.3	4.0	do	421
422	Cut June 23; flower head invisible *a†*	82.30	1.97	4.68	2.47	7.88	0.70	11.2	26.4	13.9	44.5	4.0	do	422
423	Cut July 1; in full bloom *a†*	73.40	2.37	5.53	4.21	13.46	1.03	8.9	20.8	15.8	50.6	3.9	do	423
424	Cut July 15; in seed *a†*	63.70	2.44	5.48	6.48	20.19	1.71	6.7	15.1	17.9	55.6	4.7	do	424
425	Time of cutting unknown *b*	73.33	2.16	4.09	8.12	11.61	0.69	8.1	15.3	30.4	43.6	2.6	N. J. Ex. Sta. Rep., 1884, p. 106	425
426	Cut July 30; first cutting *b h * §*	73.48	2.08	3.66	8.38	11.73	0.67	7.9	13.8	31.6	44.2	2.5	N. J. Ex. Sta. Rep., 1885, p. 171	426
427	Cut Aug. 26; second cutting *b h * §*	68.89	2.79	4.63	8.66	14.07	0.96	9.0	14.9	27.9	45.1	3.1	do	427
428	Time of cutting unknown	75.63	1.55	3.66	6.86	11.08	1.22	6.4	15.0	28.2	45.4	5.0	N. Y. State Ex. Sta. Rep., 1886, p. 365	428
429	Do	72.92	1.74	3.94	7.86	12.15	1.32	6.5	14.5	29.2	44.9	4.9	N. Y. State Ex. Sta. Rep., 1887, p. 425	429
	Cut June 24, 1886 (fertilizers, pounds per acre)—													
430	300 sulphate of potash *a c d e*	67.45	1.98	4.54	9.19	15.50	1.34	6.1	13.9	28.2	47.7	4.1	N. Y. State Ex. Sta. Rep., 1887, p. 444	430
431	150 sulphate of ammonia *a c d e*	65.97	2.15	4.44	10.35	15.80	1.29	6.3	13.1	30.4	46.4	3.8	do	431
432	350 acid phosphate *a c d e*	67.20	2.20	4.76	10.13	14.41	1.30	6.7	14.5	30.9	43.9	4.0	do	432
433	300 sulphate of potash, 150 sulphate of ammonia, 350 acid phosphate. *a c d e*	69.91	2.02	4.55	9.64	12.64	1.24	6.7	15.1	32.0	42.1	4.1	do	433
434	300 sulphate of potash, 350 acid phosphate. *a c d e*	69.77	2.05	4.38	9.04	13.50	1.26	6.8	14.5	29.9	44.6	4.2	do	434
435	150 sulphate of ammonia *a d e*	68.10	2.06	4.53	10.70	13.34	1.27	6.5	14.2	33.6	41.7	4.0	do	435
436	150 sulphate of ammonia 350 acid phosphate. *a d e*	65.83	2.15	5.06	11.31	15.26	1.39	6.3	14.8	30.2	44.6	4.1	do	436
437	150 sulphate of ammonia, 350 acid phosphate, 350 lime. *a d e*	67.43	2.06	4.82	9.78	14.44	1.27	6.3	14.8	30.0	45.0	3.9	do	437
438	300 sulphate of potash, 150 sulphate of ammonia, 350 lime. *a d e*	68.42	2.07	4.34	9.51	14.30	1.36	6.6	13.8	30.1	45.2	4.3	do	438
439	300 sulphate of potash, 150 sulphate of ammonia, 350 lime, 350 acid phosphate. *a d e*	71.15	1.89	4.34	8.46	13.01	1.15	6.6	15.1	29.3	45.0	4.0	do	439
440	150 sulphate of ammonia, 350 lime, 550 gypsum. *a d e*	70.10	1.99	4.30	8.68	13.98	0.97	6.7	14.4	29.0	46.7	3.2	do	440
441	300 sulphate of potash, 150 sulphate of ammonia, 550 gypsum, 350 acid phosphate. *a d e*	68.37	2.10	4.21	9.05	15.12	1.15	6.6	13.3	28.6	47.8	3.7	do	441

442	350 lime *a d e*	66.54	2.15	4.27	10.57	14.93	1.34	6.4	12.8	31.6	44.6	4.6	....do	442
443	550 gypsum *a d e*	68.64	2.03	4.00	9.83	14.24	1.24	6.	12.8	31.4	45.4	3.9	....do	442
444	Nothing *a d e*	71.02	1.80	3.80	8.83	13.38	1.17	6.2	13.1	30.5	46.2	4.0	....do	444
445	100 salt *a d e*	68.10	2.15	4.76	10.04	13.82	1.13	6.7	14.9	31.5	43.4	3.5	....do	445
446	180 nitrate of soda *a d e*	69.80	1.91	4.21	9.16	13.62	1.30	6.3	13.9	30.4	45.1	4.3	....do	446
447	150 sulphate of ammonia *a d e*	69.66	2.05	4.44	8.95	13.59	1.31	6.8	14.6	29.5	44.8	4.3	....do	447
448	150 muriate of potash *a d e*	66.37	2.26	5.63	10.84	13.45	1.45	6.7	16.8	32.3	39.9	4.3	....do	448
449	300 sulphate of potash *a d e*	66.80	2.12	4.67	10.94	13.71	1.76	6.4	14.1	33.0	41.2	5.3	....do	449
450	50 ferrous sulphate *a d e*	68.67	1.97	4.58	10.15	13.19	1.44	6.3	14.6	32.4	42.1	4.6	....do	450
451	Cut June 18; full bloom *a h i j*	71.27	2.09	3.47	8.36	13.74	1.07	7.2	12.1	29.1	47.9	3.7	Pa. Ex. Sta. Bul. 1, 1887	451
452	Time of cutting unknown	84.64	2.33	3.43	3.06	5.73	0.81	15.2	22.3	19.9	37.3	5.3	Pa. Ex. Sta. Rep., 1888, p. 86	452
453	First crop, cut in bloom *a h i j*	91.78	0.86	1.71	1.82	3.49	0.34	10.4	20.8	22.2	42.5	4.1	Wis. Ex. Sta. Rep., 1889, p. 210	453
454	Second crop, cut when flower heads appeared. *a h i j*	77.52	1.74	3.33	5.58	11.16	0.67	7.8	14.8	24.8	49.6	3.0	....do	454
455	Third crop, cut when flower heads appeared. *a h i j*	72.51	1.98	4.37	6.57	13.52	1.05	7.2	15.9	23.9	49.2	3.8	....do	455
	All analyses: Maximum	91.78	4.04	7.13	14.69	25.75	1.76	15.2	26.5	33.6	55.6	7.6		
	All analyses: Minimum	47.13	0.86	1.71	1.82	3.49	0.34	6.1	10.4	11.0	37.4	1.7		
	All analyses: Average	**70.79**	**2.10**	**4.41**	**8.12**	**13.45**	**1.13**	**7.2**	**15.3**	**27.8**	**45.8**	**3.9**		
	Average, before bloom, 2 analyses	**72.00**	**2.40**	**5.00**	**6.50**	**13.30**	**0.80**	**8.6**	**17.8**	**23.2**	**47.5**	**2.9**		
	Average, in full bloom, 5 analyses.‖	**72.70**	**2.20**	**4.30**	**6.50**	**13.40**	**0.90**	**8.1**	**15.7**	**23.8**	**49.2**	**3.2**		
	Average, after bloom and in seed, 4 analyses.¶	**68.20**	**2.20**	**4.50**	**7.20**	**16.70**	**1.20**	**6.9**	**14.2**	**22.6**	**52.5**	**3.8**		
456	White clover (*Trifolium repens*)	78.23	1.79	4.42	4.70	9.44	1.42	8.2	20.3	21.6	43.4	6.5	N. Y. State Ex. Sta. Rep.. 1886, p. 365	456
457	Alsike clover (*Trifolium hybridum*)	77.29	1.95	3.66	5.32	10.76	1.02	8.6	16.1	23.5	47.3	4.5	....do	457
458	In bloom; cut Aug. 2; sown preceding year, in drills 10 to 12 inches apart. *a*	75.00	1.93	3.63	7.26	10.98	1.20	6.8	14.5	29.0	44.9	4.8	Pa. Ex. Sta. Rep., 1887, p. 136	458
459	In bloom	72.26	2.09	4.23	9.35	11.22	0.85	7.5	15.3	33.7	40.4	3.1	N. Y. State Ex. Sta. Rep., 1888, p. 237	459
460	Do	74.53	1.88	3.93	7.99	11.53	0.64	7.4	15.4	29.4	45.3	2.5	....do	460
	All analyses, excluding 456: Maximum	77.29	2.09	4.23	9.35	11.53	1.20	8.6	16.1	33.7	47.3	4.8		
	All analyses, excluding 456: Minimum	72.26	1.88	3.63	5.32	10.76	0.64	6.8	14.5	23.5	40.4	2.5		
	All analyses, excluding 456: Average	**74.77**	**1.96**	**3.86**	**7.36**	**11.12**	**0.93**	**7.8**	**15.3**	**29.2**	**44.0**	**3.7**		
	Alfalfa, lucern (*Medicago sativa*):													
461	Cut when young; no buds *a*	80.40	2.27	5.77	2.54	8.20	0.82	11.6	29.5	12.9	41.8	4.2	U. S. Dept. Agr. Rep., 1880, p. 152	461
462	Cut before bloom *a*	79.30	2.01	4.43	4.03	9.34	0.89	9.7	21.4	19.5	45.1	4.3	....do	462
463	Cut June 1; in bloom; aftermath	70.10	2.00	5.03	6.66	15.36	0.85	6.7	16.9	22.3	51.3	2.8	....do	463
464	Time of cutting unknown	75.01	2.15	4.07	8.68	9.45	0.64	8.6	16.3	34.7	37.8	2.6	N. Y. State Ex. Sta. Rep., 1883, p. 150	464
465	Do	56.73	3.77	7.01	14.81	16.25	1.73	8.7	15.5	34.2	27.6	4.0	N. Y. State Ex. Sta. Rep., 1886, p. 365	465
466	Fourth cutting	67.20	3.25	7.69	8.67	11.85	1.34	9.9	23.4	26.4	36.2	4.1	....do	466
467	First cutting, June 4 *b h* **	79.43	1.92	4.13	5.84	8.14	0.54	9.3	20.0	28.4	39.7	2.6	N. J. Ex. Sta. Rep., 1886, p. 171	467
468	Second cutting, July 19 *b h* **	73.80	1.78	4.82	9.08	10.03	0.49	6.8	18.4	34.6	38.3	1.9	....do	468

* First growth. † Aftermath. ‡ From same field. § In *loc. cit.*, analyses and tonnage per acre compared with that of lucern.
‖ Nos. 414, 419, 420, 451, 453. ¶ Nos. 416, 420, 421, 424. ** In *loc. cit.*, analysis and yield compared with that of clover.

ANALYSES OF AMERICAN FEEDING STUFFS—Continued.

		In fresh or air dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	SILAGE—Continued.													
	Corn (maize) silage—Continued.	%	%	%	%	%	%	%	%	%	%	%		
623	Particulars unknown	72.92	1.69	1.76	7.28	15.65	0.71	6.2	6.5	27.0	57.7	2.6	N. J. Ex. Sta. Rep., 1884, p. 106	623
624	Do. *b*	87.16	1.64	1.81	4.09	5.12	0.27	12.8	14.1	31.1	39.9	2.1	....do	624
625	Do. *b*	83.18	1.27	1.77	5.21	8.20	0.37	7.5	10.6	31.0	48.7	2.2	....do	625
626	Do. *b*	81.02	1.33	1.71	5.45	10.17	0.32	7.0	9.0	28.8	54.5	1.7	....do	626
627	Do. *b*	75.77	1.41	1.74	6.47	14.34	0.27	5.8	7.2	26.7	59.2	1.1	....do	627
628	Do. *b*	70.76	1.49	1.71	7.34	18.40	0.30	5.1	5.8	25.1	63.0	1.0	N. J. Ex. Sta. Rep., 1884, p. 107	628
629	Do. *b*	71.86	1.24	1.72	7.35	17.51	0.32	4.4	6.1	26.2	62.2	1.1	....do	629
630	Do. *b*	81.62	1.59	1.52	5.58	9.45	0.24	8.6	8.3	30.4	51.4	1.3	....do	630
631	Do. *b*	82.05	1.44	1.52	4.93	9.83	0.23	8.0	8.5	27.4	54.8	1.3	....do	631
632	From frosted maize	85.42	2.94	1.75	4.17	5.40	0.32	20.2	12.0	28.6	37.0	2.2	Conn. State Ex. Sta. Rep., 1884, p. 110	632
633	From maize that suffered from drouth	83.04	1.22	0.95	6.09	8.06	0.64	7.2	5.6	35.9	47.5	3.8	....do	633
634	Particulars unknown	78.61	1.50	1.60	7.10	10.22	0.97	7.0	7.5	33.2	47.8	4.5	N. Y. State Ex. Sta. Rep., 1884, p. 47	634
635	Do	82.35	1.05	0.87	5.87	8.72	1.14	6.0	4.9	33.3	49.4	6.4	....do	635
636	Do	81.58	0.91	1.13	5.01	7.22	1.15	5.9	7.3	32.5	46.9	7.4	....do	636
637	From corn in tassel	86.88	0.91	1.65	4.42	5.63	0.52	6.9	12.5	33.7	43.0	3.9	Mass. State Ex. Sta. Bul. 10, 1884	637
638	Particulars unknown	87.68	0.91	1.38	4.04	5.62	0.37	7.4	11.2	32.8	45.6	3.0	Ala. Ex. Sta. Bul. 3, 1884	638
639	From Clark variety; cut before putting into silo in pieces 1¼ to 1½ inches long.	81.88	0.92	1.42	4.75	10.40	0.63	5.1	7.8	26.2	57.4	3.5	Mass. State Ex. Sta. Rep., 1885, p. 19	639
640	Same crop as No. 639, but put into silo without cutting.	83.18	0.71	1.51	4.96	9.02	0.62	4.2	9.0	29.4	53.7	3.7	Mass. State Ex. Sta. Rep., 1885, p. 20	640
641	Particulars unknown	81.49	1.25	1.02	5.74	10.17	0.33	6.7	5.5	31.0	55.0	1.8	Wis. Ex. Sta. Rep., 1886, p. 96	641
642	In first silk	83.17	1.31	2.06	5.11	7.07	1.28	7.8	12.3	30.4	41.9	7.6	Ky. Ex. Sta. Bul. 5, 1886	642
643	Particulars unknown	82.78	1.34	1.57	5.22	8.36	0.73	7.8	9.1	30.3	48.5	4.3	....do	643
644	Do	86.98	0.67	0.72	5.11	5.90	0.62	5.1	5.5	39.3	45.4	4.7	N. Y. State Ex. Sta. Rep., 1886, p. 365	644
645	Do	86.07	0.68	0.77	2.98	8.98	0.52	4.9	5.5	21.3	64.6	3.7	....do	645
646	Do	86.25	0.94	0.93	4.79	6.42	0.67	6.9	6.8	34.8	46.6	4.9	....do	646
647	Silo filled at intervals during 8 days without exclusion of air, then covered.	78.05	0.69	1.62	4.50	14.30	0.84	3.2	7.4	20.5	65.1	3.8	Mass. State Ex. Sta. Rep., 1886, p. 63	647
648	Same maize as No. 647, but filled and covered at once.	76.90	1.21	1.01	4.08	15.17	0.73	5.2	8.3	17.7	65.7	3.1	....do	648
649	Silage of No. 19, Clark variety *c*	71.60	0.95	2.21	5.26	18.26	1.72	3.3	7.8	18.5	64.3	6.1	Mass. State Ex. Sta. Rep., 1887, p. 93	649
650	From field-cured stover; put into silo before frosts; allowed to heat 4 days before weighting.	80.06	1.49	1.50	6.10	9.87	0.98	7.5	7.6	30.5	49.5	4.9	Vt. Ex. Sta. Rep., 1887, p. 125	650
651	Same as No. 650, except was weighted as soon as filled.	80.07	1.28	1.40	5.65	10.65	0.95	6.4	7.0	28.4	53.4	4.8	....do	651

652	Variety unknown	64.42	1.74	2.82	7.18	22.24	1.58	4.9	7.9	20.2	62.5	4.5	Ill. Ex. Sta. Bul. 2, 1888, p. 21	652
653	Do. *a*	74.94	2.61	2.04	7.51	12.26	0.64	10.4	8.1	30.0	48.9	2.5	La. Ex. Sta. Bul. 17, 1888, p. 131	653
654	Stowell Evergreen corn, cut and put into silo when kernels were just past the milk.	78.88	1.33	1.89	5.44	11.77	0.69	6.3	8.9	25.8	55.7	3.3	Mass. State Ex. Sta. Rep., 1888, p. 86	654
655	Southern White, cut and put into silo when kernels were just past the milk.	83.48	0.71	1.14	5.83	8.30	0.54	4.3	6.9	35.3	50.2	3.3	....do	655
656	Variety unknown	77.24	1.12	2.20	4.70	14.02	0.72	4.9	9.7	20.7	61.5	3.2	Mass. State Ex. Sta. Rep., 1888, p. 37	656
657	Southern White, cut when tassels began to appear.	79.19	2.01	1.58	7.61	8.83	0.78	2.6	7.6	36.6	42.4	3.8	Reference unknown	657
658	Used in feeding experiments. *a*	77.94	1.71	1.92	5.92	11.71	0.80	7 7	8.7	26.8	53.2	3.6	Wis. Ex. Sta. Rep., 1888, p. 31	658
659	Yellow dent, well preserved, sweet *a* †	74.13	1.86	2.98	5.57	14.10	1.36	7.2	11.	21.5	54.5	5.3	Wis. Ex. Sta. Rep., 1888, p. 85	659
660	Yellow dent, average of 6 samples taken Nov. 3 to Dec. 30; silage of No. 81; quality good in first sample, poor in last. *a* †	70.62	2.59	2.70	9.68	13.69	0.72	8.8	9.	32.9	46.7	2.4	....do	660
661	Yellow dent, dry silage; average of 4 samples taken Jan. 27 to Mar. 8; silage of No. 741; quality fair to good. *a* †	30.76	4.38	6.18	21.48	35.84	1.36	6.3	8.9	31.0	51.8	2.0	....do	661
662	Wisconsin White Dent, quality very good *a* †	78.45	1.84	1.86	5.83	11.02	1.00	8.5	8.6	27.0	51.3	4.6	....do	662
663	Wisconsin White Dent, sweet; ⅔ maize, ⅓ rye straw. *a* †	80.55	1.41	2.11	7.24	7.46	1.23	7.2	10.8	37.2	38.4	6.4	....do	663
664	Large, sweet corn; average of 5 samples taken Nov. 16 to Jan. 12; silage of Nos. 129, 130; very fine, aromatic. *a* †	77.94	2.02	1.90	5.87	11.48	0.79	9.2	8.6	26.6	52.0	3.6	....do	664
665	Large, sweet corn; average of 5 samples taken Feb. 7 to Mar. 5; silage of No. 131; quality good in first sample, poor in last. *a* †	68.32	3.33	2.87	9.35	14.98	1.25	10.5	9.0	29.4	47.1	4.0	....do	665
666	Southern Sweet (Sheep-Tooth); put into silo Sept. 8, taken out Feb. 15; corn planted too thick for development of many ears; pleasant odor; relished by cattle. *a* †	73.85	3.11	3.62	7.65	11.25	0.52	11.9	13.9	29.2	43.0	2.0	....do	666
667	Burrill & Whitman Southern Ensilage; average of 5 samples taken Jan. 14 to Feb. 15; silage of No. 82; quality very good. *a* †	82.67	1.83	1.73	6.89	6.23	0.65	10.6	9.9	39.7	36.1	3.7	....do	667
668	Burrill & Whitman Southern Ensilage; put into silo Aug. 29 to Sept. 6 without cutting; average of 2 samples taken Mar. 12 and Apr. 2; silage of No. 82; quality very best. *a* †	82.72	1.87	1.39	6.94	6.29	0.79	10.8	8.1	40.2	36.3	4.6	....do	668
669	Burrill & Whitman Southern Ensilage; put into silo Sept. 9 to 16 after cutting; taken out Feb. 15; kept perfectly, no waste. *a* †	79.90	1.48	2.66	6.82	7.76	1.38	7.4	13.2	33.	38.6	6.9	....do	669
670	Variety unknown	80.50	1.26	1.62	3.63	12.45	0.54	6.5	8.3	18.7	63.7	2.8	N. Y. State Ex. Sta. Rep., 1888, p. 237	670
	Burrill & Whitman Southern Ensilage dent, wilted:													
671	Cut Aug. 25 *a*‡	81.00	1.29	1.91	5.84	9.06	0.90	6.8	10.1	30.7	47.7	4.7	Mich. Ex. Sta. Bul. 49, 1889	671
672	Cut Sept. 1 *a*‡	77.70	1.68	2.05	6.32	11.26	0.99	7.5	9.2	28.	50.5	4.5	....do	672
673	Cut Sept. 8 *a*‡	78.68	1.27	1.58	6.33	11.32	0.82	6.0	7.4	29.7	53.1	3.8	....do	673

* 2.00 sand and clay. † In *loc. cit.*, lactic and acetic acid given. ‡ Plant in rows 3 feet 9 inches apart; stalks 10 inches apart.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	HAY AND OTHER DRIED COARSE FODDERS—Continued.													
	CORN (MAIZE) FODDER—continued.													
	Corn (maize) stalks, field-cured:													
	Rhode Island White Cap, planted in rows 4 feet apart; 1,000 pounds ammoniated superphosphate per acre—	%	%	%	%	%	%	%	%	%	%	%		
802	One stalk in 4 feet	76.14	1.55	2.84	6.88	12.12	0.46	6.5	11.9	28.8	50.9	1.9	Conn. State Ex. Sta. Rep., 1889, p. 25	802
803	One stalk in 2 feet	74.93	1.22	2.38	8.35	12.73	0.39	4.9	9.5	33.3	50.7	1.6	do	803
804	One stalk to a foot	59.66	1.88	2.83	14.02	20.75	0.86	4.7	7.0	34.8	51.4	2.1	do	804
805	Two stalks to a foot	67.28	1.67	1.76	11.89	16.97	0.43	5.1	5.4	36.4	51.8	1.3	do	805
806	Four stalks to a foot	78.53	0.86	1.15	7.96	11.18	0.32	4.0	5.4	37.0	52.1	1.5	do	806
807	Eight stalks to a foot	70.32	0.81	1.83	9.47	17.00	0.57	2.7	6.2	31.9	57.3	1.9	do	807
808	Rhode Island White Cap, planted in rows 4 feet apart; 2,000 pounds ammoniated superphosphate per acre, 8 stalks to a foot.	51.33	1.95	2.98	16.80	25.98	0.98	4.0	6.1	34.5	53.4	2.0	do	808
	White-Edged Dent, planted in rows 4 feet apart; 1,000 pounds ammoniated superphosphate per acre—													
809	One stalk in 4 feet	76.25	1.22	1.90	8.51	11.70	0.42	5.1	8.0	35.8	49.3	1.8	do	809
810	One stalk in 2 feet	73.98	0.99	1.68	9.64	13.27	0.44	3.8	6.5	37.1	50.9	1.7	do	810
811	One stalk to a foot	68.47	1.05	1.53	11.97	16.48	0.50	3.3	4.8	38.1	52.2	1.6	do	811
812	Two stalks to a foot	61.06	1.07	1.62	14.89	20.84	0.52	2.7	4.2	38.2	53.5	1.4	do	812
813	Four stalks to a foot	66.47	0.69	1.38	10.86	20.14	0.46	2.1	4.1	32.4	60.0	1.4	do	813
814	Eight stalks to a foot	66.70	0.63	1.37	10.25	20.63	0.42	1.9	4.1	30.8	61.9	1.3	do	814
	White-Edged Dent, planted in rows 4 feet apart; 2,000 pounds ammoniated superphosphate per acre—													
815	Two stalks to a foot	67.69	0.94	1.49	12.02	17.42	0.44	2.9	4.6	37.2	54.0	1.3	do	815
816	Four stalks to a foot	67.47	0.84	1.53	10.84	18.73	0.59	2.6	4.7	33.3	57.6	1.8	do	816
817	Variety unknown	22.63	5.35	6.47	28.43	35.87	1.25	6.9	8.4	36.7	46.3	1.7	N. Y. State Ex. Sta. Rep., 1888, p. 238	817
818	Tops of stalks, 4.60 per cent of the stover *a*	14.35	5.12	3.52	30.54	45.08	1.16	6.0	4.1	35.8	52.8	1.3	Pa. Ex. Sta. Rep., 1887, p. 154	818
819	Butts of stalks, 10.24 per cent of the stover. *a*	16.29	4.96	3.49	30.71	42.36	1.80	6.0	4.2	36.7	50.9	2.2	do	819
820	Middle portion of stalks, 17.07 per cent of the stover. *a*	15.72	4.39	2.71	30.50	44.87	1.07	5.2	3.2	36.2	53.1	1.3	do	820
821	Upper half of stalks, 12 per cent of the stover.	45.67	2.46	1.88	22.57	26.76	0.66	4.5	3.5	41.5	49.3	1.2	Conn. State Ex. Sta. Rep., 1887, p. 124	821

822	Lower half of stalks, 34 per cent of the stover.	65.94	1.22	1.10	15.03	16.23	0.48	3.6	3.2	44.2	47.6	1.4	....do	822
	All analyses, excluding Nos. 817-822. Maximum	78.53	1.95	2.98	16.80	25.98	0.98	6.5	11.9	38.2	61.9	2.1		
	All analyses, excluding Nos. 817-822. Minimum	51.33	0.63	1.15	6.88	11.18	0.32	1.9	4.1	28.8	49.3	1.3		
	All analyses, excluding Nos. 817-822. Average	68.42	1.16	1.88	10.96	17.06	0.52	3.6	5.9	34.8	54.1	1.6		
	Corn (maize) stover, field-cured:													
823	Norfolk White (dent), raised on land long tilled.	27.59	4.76	4.97	24.76	36.37	1.55	6.5	6.8	34.2	50.3	2.2	Am. Jour. Sci. and Arts, 1877, p. 208	823
824	Norfolk White (dent), raised on new land ...	26.92	3.62	3.79	25.18	39.42	1.07	4.9	5.2	34.5	54.0	1.4	....do	824
825	Ohio Dent	36.49	2.87	4.63	19.08	35.78	1.16	4.5	7.3	30.0	56.4	1.8	Conn. State Ex. Sta. Rep., 1878, p. 60....	825
826	White-Edged Dent....	23.13	4.34	7.19	27.24	36.45	1.65	5.7	9.4	35.4	47.4	2.1	Conn. State Ex. Sta. Rep., 1881, p. 88....	826
827	Topover corn	25.00	4.59	4.85	27.08	36.61	1.87	6.1	6.5	36.1	48.8	2.5	Mass. State Ex. Sta. Rep., 1885, p. 81....	827
828	Variety unknown....	15.44	6.58	8.30	23.40	44.63	1.65	7.8	9.8	27.7	52.7	2.0	Ky. Ex. Sta. Bul. 2, 1886....	828
829	Do	16.23	6.47	4.85	24.91	46.18	1.36	7.7	5.8	29.7	55.2	1.6	Ky. Ex. Sta. Bul. 5, 1886....	829
830	Do	18.00	7.00	4.30	25.44	43.94	1.32	8.5	5.2	31.0	53.7	1.6	....do	830
831	Western Dent	16.67	5.47	5.54	29.53	43.37	1.42	4.2	6.6	35.4	52.1	1.7	Mass. State Ex. Sta. Bul. 26, 1887....	831
832	Variety unknown	15.40	3.57	7.75	17.71	53.34	2.23	4.2	9.2	20.9	63.1	2.6	Mass. State Ex. Sta. Rep., 1887, p. 29..	832
833	White-Edged Dent *chij*	48.65	3.50	3.89	16.69	26.39	0.88	6.8	7.6	32.5	51.4	1.7	Conn. State Ex. Sta. Rep., 1887, p. 119 ..	833
834	Variety unknown *a*	32.65	1.74	3.01	27.34	34.08	1.18	4.9	4.5	40.6	45.4	1.6	Ill. Ex. Sta. Bul. 2, 1888....	834
835	Dent, 108 bushels of ears to the acre *a*....	15.53	6.36	5.76	25.87	44.49	1.99	7.6	6.7	30.5	52.8	2.4	Pa. Ex. Sta. Bul. 3, 1888....	835
836	Variety unknown	19.07	3.41	7.42	16.94	51.03	2.13	4.2	9.2	20.9	63.1	2.6	Mass. Ex. Sta. Rep., 1888, p. 37	836
	Flint variety—													
837	No fertilizer *hij*	44.84	3.03	4.36	20.02	26.76	0.99	5.5	7.9	36.3	48.5	1.8	Storrs School Ex. Sta. Rep., 1889, p. 149 .	837
838	Nitrate of soda *hij*....	49.76	2.21	4.82	14.92	27.44	0.85	4.4	9.6	29.7	54.6	1.7	....do	838
839	Dissolved boneblack *hij*....	47.44	2.73	4.94	16.14	27.86	0.89	5.2	9.4	30.7	53.0	1.7	....do	839
840	Muriate of potash....	48.89	2.81	2.86	15.33	29.14	0.97	5.5	5.6	30.0	57.0	1.9	....do	840
841	Nitrate of soda, dissolved boneblack *hij*	52.23	2.48	4.44	14.48	25.56	0.81	5.2	9.3	30.3	53.5	1.7	....do	841
842	Nitrate of soda, muriate of potash *hij*...	49.77	3.01	2.76	17.23	26.38	0.85	6.0	5.5	34.3	52.5	1.7	....do	842
843	Dissolved boneblack, muriate of potash (mixed minerals) *hij*	54.57	2.43	2.09	14.13	25.78	1.00	5.4	4.6	31.1	56.7	2.2	....do	843
844	Mixed minerals as in No. 843; nitrate of soda ½ ration. *hij*	52.96	2.68	2.26	16.09	25.21	0.80	5.7	4.8	34.2	53.6	1.7	....do	844
845	Mixed minerals as in No. 843; nitrate of soda ¾ ration. *hij*	46.74	2.88	2.77	18.75	27.96	0.90	5.4	5.2	35.2	52.5	1.7	....do	845
846	Mixed minerals as in No. 843; nitrate of soda full ration. *hij*	54.41	2.37	2.55	15.55	24.30	0.82	5.2	5.6	34.1	53.3	1.8	....do	846
847	Mixed minerals as in No. 843; sulphate ammonia ½ ration. *hij*	55.18	2.42	2.29	14.39	24.87	0.85	5.4	5.1	32.1	55.5	1.9	....do	847
848	Mixed minerals as in No. 843; sulphate of ammonia ¾ ration. *hij*	55.61	2.57	1.82	15.45	23.75	0.80	5.8	4.1	34.8	53.5	1.8	....do	848
849	Mixed minerals as in No. 843; sulphate of ammonia full ration. *hij*	50.37	2.78	2.43	18.11	25.66	0.65	5.6	4.9	36.5	51.7	1.3	....do	849
850	Mixed minerals as in No. 843; dried blood ½ ration. *hij*	57.44	2.38	1.96	14.17	23.28	0.77	5.6	4.6	33.3	54.7	1.8	....do	850
851	Mixed minerals as in No. 843; dried blood ¾ ration. *hij*	55.78	2.43	1.99	15.34	23.62	0.84	5.5	4.5	34.7	53.4	1.9	....do	851
852	Mixed minerals as in No. 843; dried blood full ration. *hij*	54.20	2.61	2.02	15.80	24.59	0.78	5.7	4.4	34.5	53.7	1.7	....do	852

* Adds 99.26 (fresh or air-dry material).

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	HAY AND OTHER DRIED COARSE FODDERS—Continued.													
	HAY OF GRASSES—continued.													
	Timothy, herd's grass (of New England and New York) (*Phleum pratense*)—Cont'd.	%	%	%	%	%	%	%	%	%	%	%		
1005	Time of cutting unknown	8.90	4.64	5.31	29.60	48.58	2.97	5.1	5.8	32.5	53.3	3.3	N. J. Ex. Sta. Rep., 1880, p. 46	1005
1006	Do	13.47	3.86	7.63	29.28	43.48	2.30	4.5	8.8	33.8	50.2	2.7	Conn. State Ex. Sta. Rep., 1881, p. 87	1006
1007	Cut in full bloom; grown in Maine	10.70	3.80	6.09	27.70	48.50	3.30	4.3	6.7	31.0	54.3	3.7	Agr. of Me., 1882, p. 297	1007
1008	Cut past bloom; grown in Maine	7.80	3.60	4.60	30.20	51.00	2.80	3.9	5.0	32.7	55.4	3.0	Agr. of Me., 1882, p. 298	1008
1009	Time of cutting unknown	11.96	4.28	6.44	34.25	41.09	1.98	4.9	7.3	39.1	46.4	2.3	N. J. Ex. Sta. Rep., 1882, p. 71	1009
1010	Cut after bloom	8.70	3.69	6.02	33.41	45.65	1.93	4.0	7.2	36.6	50.1	2.1	Mass. State Ex. Sta. Rep., 1883, p. 80	1010
1011	Cut in full bloom; grown in Maine	12.20	4.95	6.25	26.81	46.99	2.80	5.7	7.2	30.4	53.5	3.2	Agr. of Me., 1883, p. 432	1011
1012	Cut out of bloom; grown in Maine	12.40	4.02	5.00	26.83	49.25	2.50	4.6	5.7	30.6	56.2	2.9	....do	1012
1013	Cut 1881, in bloom (eastern farm); weight,* 3,634; weight of dry hay, 2,307.	9.53	4.55	7.29	33.36	43.04	2.23	5.0	8.1	36.9	47.5	2.5	Pa. State Col. Bul. 5, 1883, p. 41	1013
1014	Cut 1881, nearly ripe (eastern farm); weight,* 4,234; weight of dry hay, 3,390.	9.46	3.33	5.14	32.35	47.57	2.15	3.7	5.7	35.7	52.5	2.4	....do	1014
1015	Cut 1882, in bloom (eastern farm); weight,* 3,634; weight of dry hay, 2,556.	8.96	2.50	5.79	36.10	44.51	2.14	2.8	6.4	39.6	48.9	2.3	....do	1015
1016	Cut 1882, nearly ripe (eastern farm); weight,* 3,802; weight of dry hay, 3,168.	8.88	2.79	5.31	32.71	47.71	2.60	3.1	5.8	35.9	52.4	2.8	....do	1016
1017	Cut 1881, in bloom (central farm); weight,* 5,000; weight of dry hay, 3,922.	10.27	4.31	5.23	33.84	44.32	2.03	4.8	5.8	37.7	49.4	2.3	....do	1017
1018	Cut 1881, nearly ripe (central farm); weight,* 5,270; weight of dry hay, 4,035.	10.06	3.67	4.27	32.02	48.03	2.01	4.1	4.7	35.6	53.4	2.2	....do	1018
1019	Cut 1882, in bloom (central farm); weight,* 3,570; weight of dry hay, 3,037.	7.00	3.40	5.39	37.11	44.86	2.24	3.7	5.8	39.9	48.2	2.4	....do	1019
1020	Cut 1882, nearly ripe (central farm); weight,* 4,017; weight in dry hay, 3,413.	7.00	3.30	4.88	33.39	49.09	2.34	3.6	5.3	35.9	52.7	2.5	....do	1020
1021	Just out of bloom	10.55	4.19	8.07	26.13	48.69	2.37	4.7	9.0	29.2	54.4	2.7	Mass. Ex. Sta. Rep., 1884, p. 58	1021
1022	Time of cutting unknown	6.50	3.00	5.06	24.34	58.52	2.58	3.2	5.4	26.0	62.6	2.8	Mo. State Agr. Col. Farm Bul. 11, 1884, p. 5.	1022
1023	Cut June 20, 1880; grown in Pennsylvania *a k*	14.30	4.33	7.82	21.72	49.06	2.77	5.1	9.1	25.4	57.2	3.2	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 126.	1023
1024	Cut 1881; grown in New Hampshire *a k*	14.30	3.92	4.96	24.23	48.99	3.60	4.6	5.7	28.3	57.2	4.2	....do	1024
1025	Cut 1882; grown in Indiana *a k*	14.30	6.04	4.73	27.65	45.41	1.87	7.1	5.5	32.2	53.0	2.2	....do	1025
1026	Grown in Massachusetts	8.30	5.61	8.95	27.68	47.12	2.34	6.1	9.7	30.2	51.4	2.6	Mass. Ex. Sta. Rep., 1885, p. 80	1026
1027	Cut 1884; sample taken 1885; grown in Maine.	10.95	4.00	7.00	30.60	45.10	2.35	4.5	7.9	34.3	50.7	2.6	Mo. Ex. Sta. Rep. 1885–'86, p. 51	1027
1028	Cut 1885, in bloom; sample taken from field; grown in Maine.	7.05	6.02	7.13	35.80	40.59	3.41	6.5	7.7	38.5	43.6	3.7	....do	1028

1153	Panic grass (*Panicum dichotomum*), cut in 1879; grown in Alabama. *a k*	14.30	8.68	5.80	25.27	42.91	3.09	10.1	6.7	29.5	50.1	3.6	.....do.....	1153
1154	Cane-like panic (*Panicum divaricatum*), cut in 1879; grown in Alabama. *a k*	14.30	12.25	7.92	23.19	40.18	2.16	14.3	9.2	27.1	46.9	2.5	.....do.....	1154
1155	Panic grass (*Panicum gibbum*), cut in 1878; grown in Alabama. *a k*	14.30	7.31	10.47	20.71	43.65	3.56	8.	12.3	24.1	50.9	4.2	.....do.....	1155
1156	Guinea grass (*Panicum jumentorum*), cut in 1878; grown in Alabama. *a k*	14.30	7.75	7.62	27.01	41.98	1.34	9.	8.9	31.5	49.0	1.6	.....do.....	1156
1157	Obtuse flowered panic (*Panicum obtusum*), cut in 1878; grown in Texas. *a k*	14.30	9.38	6.21	28.38	39.80	1.93	10.	7.3	33.1	46.4	2.3	.....do.....	1157
1158	Panic grass (*Panicum proliferum*), cut in 1879; very ripe and rank; grown in Alabama. *a k*	14.30	9.58	9.49	20.63	43.42	2.58	11.	11.1	24.1	50.6	3.0	.....do.....	1158
1159	Texas millet (*Panicum texanum*), cut in 1878; grown in Texas. *a k*	14.30	8.65	4.70	23.16	47.07	2.12	10.	5.5	27.0	54.9	2.5	.....do.....	1159
1160	*Paspalum ovatum*, grown in Maine *a k*	14.30	7.28	5.25	21.21	50.07	1.89	8.	6.1	24.8	58.4	2.2	.....do.....	1160
1161	*Paspalum præcox*, cut in 1879; grown in Alabama. *a k*	14.30	6.35	5.08	21.69	49.49	3.09	7.4	5.9	25.3	57.8	3.6	.....do.....	1161
1162	Canary grass (*Phalaris intermedia*, var. *angusta*), cut in 1879; grown in South Carolina. *a k*	14.30	9.99	13.67	21.29	37.23	3.52	11.7	16.0	24.8	43.4	4.1	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 126.	1162
1163	Tall spear grass, wood grass (*Poa alsodes*), cut June 2, 1880; grown in Pennsylvania. *a k*	14.30	8.06	11.86	18.21	44.06	3.51	9.4	13.8	21.3	51.4	4.1	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 127.	1163
1164	Texas blue grass (*Poa arachnifera*), cut in 1882; grown in Texas. *a k*	14.30	9.96	9.10	27.33	36.13	3.18	11.	10.6	31.9	42.2	3.7	.....do.....	1164
1165	Fowl meadow grass (*Poa serotina*), cut in 1878; grown in Wisconsin. *a k*	14.30	3.63	5.37	17.87	56.40	2.43	4.2	6.3	20.9	65.8	2.8	.....do.....	1165
1166	Pigeon grass, bottle grass, foxtail (*Setaria glauca*), cut Aug. 11, 1880; grown in Pennsylvania. *a k*	14.30	6.80	7.30	18.80	50.18	2.62	7.9	8.6	21.9	58.5	3.1	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 125.	1166
1167	Bristle grass, foxtail (*Setaria setosa*), cut in 1878; grown in Texas. *a k*	14.30	7.78	7.28	27.68	41.68	1.28	9.	8.5	32.3	48.6	1.5	.....do.....	1167
1168	Wild oats (*Sorghum nutans*), cut in 1879; grown in Indian Territory. *a k*	14.30	4.46	3.32	24.53	51.21	2.18	5.	3.9	28.6	59.8	2.5	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 126.	1168
1169	Smut grass (*Sporobolus indicus*), cut in 1879; grown in Mississippi. *a k*	14.30	6.03	10.55	22.00	44.28	2.80	7	12.3	25.7	51.7	3.3	.....do.....	1169
1170	Sand grass (*Triodia purpurea*), cut in 1879; grown in Indian Territory. *a k*	14.30	4.42	6.90	24.97	46.23	3.18	5.	8.1	29.1	53.9	3.7	U. S. Dept. Agr., Chem. Comp. Am. Grasses, 1884, p. 127.	1170
1171	Tall redtop (*Triodia sesleroides*), cut in 1878; grown in Texas. *a k*	14.30	4.40	5.40	32.33	41.84	1.73	5.	6.3	37.7	48.9	2.0	.....do.....	1171
	HAY OF LEGUMES.													
	Common red clover (*Trifolium pratense sesleroides*):													
1172	Time of cutting unknown	11.10	4.99	13.06	28.64	39.71	2.50	5.6	14.7	32.2	44.7	2.8	N. J. Ex. Sta. Rep., 1880, p. 46	1172
1173	Second growth	8.47	5.86	10.00	27.10	45.47	3.10	6.4	10.9	29.6	49.7	3.4	N. J. Ex. Sta. Rep., 1880, p. 47	1173
1174	Time of cutting unknown	21.82	5.13	10.88	24.67	35.03	2.47	6.2	13.9	31.6	45.3	3.0	N. Y. Cornell Ex. Sta. Rep., 1882-'83, p. 41.	1174
1175	Cut May 24; heads beginning to form	11.00	7.49	20.75	15.60	41.14	4.02	8.4	23.3	17.5	46.3	4.5	Pa. State Col. Bul. 5, 1883, p. 44	1175
1176	Cut June 5; heads formed	9.73	6.98	16.59	21.09	42.38	3.23	7.7	18.4	23.4	47.0	3.5	.....do.....	1176
1177	Cut June 22; full bloom *h**	12.60	6.18	12.81	24.53	41.12	2.76	7.1	14.6	28.1	47.0	3.2	.....do.....	1177
1178	Cut July 3; some heads dead *h**	17.23	5.46	11.33	30.13	33.30	2.55	6.6	13.7	36.4	40.2	3.1	.....do.....	1178
1179	Cut July 19; heads all dead *h**	15.15	5.25	10.62	31.83	34.79	2.36	6.2	12.5	37.5	41.0	2.8	.....do.....	1179
1180	Time of cutting unknown	10.20	7.45	12.13	30.83	36.88	2.51	8.3	13.6	34.3	41.0	2.8	N. J. Ex. Sta. Rep., 1884, p. 106	1180

* Stored in barn five or six months.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	HAY AND OTHER DRIED COARSE FODDERS—Continued.													
	HAY OF LEGUMES—continued.													
	Common red clover (*Trifolium pratense*)—Cont'd	%	%	%	%	%	%	%	%	%	%	%		
1181	Time of cutting unknown	16.13	4.29	11.31	27.12	39.58	1.57	5.1	13.5	32.3	47.2	1.9	Wis. Univ. Bul. 3, 1884, p. 6	1181
1182	Do	16.41	4.17	10.88	27.58	39.49	1.47	5.0	13.0	33.0	47.2	1.8	do	1182
1183	Do	15.41	3.88	11.61	27.27	40.04	1.79	4.6	13.7	32.2	47.4	2.1	do	1183
1184	Do	16.34	4.06	11.39	27.51	39.22	1.48	4.9	13.6	32.9	46.8	1.8	do	1184
1185	Cut July 13; in bloom	7.98	7.71	15.37	26.84	37.82	4.28	8.4	16.7	29.2	41.1	4.6	Me. Ex. Sta. Rep., 1885–'86, p. 51	1185
1186	First cut *b*	6.11	7.40	13.00	29.71	41.40	2.38	7.9	13.8	31.6	44.2	2.5	N. J. Ex. Sta. Rep., 1886, p. 158	1186
1187	Second cut *b*	7.12	8.33	13.81	25.82	42.05	2.87	9.0	14.9	27.8	45.2	3.1	do	1187
1188	First cut	7.88	6.59	13.56	27.28	42.81	1.88	7.1	14.8	29.6	46.4	2.1	do	1188
1189	Second crop *b*	8.45	6.71	13.00	27.65	42.44	1.75	7.3	14.2	30.2	46.3	2.0	do	1189
1190	First crop *b*	8.30	6.77	13.50	28.63	41.00	1.80	7.4	14.7	31.2	44.7	2.0	do	1190
1191	Time of cutting unknown	8.52	6.18	10.50	23.74	49.03	2.03	6.8	11.4	25.9	53.7	2.2	do	1191
1192	Do. *b*	8.50	6.42	13.50	24.60	44.60	2.38	7.0	14.7	26.9	48.8	2.6	do	1192
1193	Do. *b*	7.56	6.05	10.38	30.38	43.81	1.82	6.6	11.2	32.9	47.4	1.9	do	1193
1194	Do. *b*	7.62	4.95	10.31	35.65	39.27	2.20	5.4	11.2	38.6	42.4	2.4	do	1194
1195	Cut in full bloom; grown on black alluvial soil.*	9.80	7.86	14.22	25.53	38.91	3.68	8.7	15.8	28.3	43.1	4.1	Ky. Ex. Sta. Bul. 5, 1886, p. 11	1195
1196	Cut in bloom early in June; grown on rich upland; from stack.*	9.98	7.76	15.81	28.42	35.11	2.92	8.6	17.6	31.6	39.0	3.2	Ky. Ex. Sta. Bul. 5, 1886, p. 12	1196
1197	Cut in full bloom; grown on black alluvial soil; from barn.*	10.04	7.66	12.08	28.90	38.69	2.63	8.5	13.4	32.1	43.1	2.9	do	1197
1198	Cut in full bloom; grown on wet black gravel soil; from stack.*	10.70	6.31	10.63	26.32	43.42	2.62	7.1	11.9	29.5	48.6	2.9	Ky. Ex. Sta. Bul. 5, 1886, p. 13	1198
1199	Cut in full bloom early in June; grown on rich, level upland; fairly well cured and stored in barn.*	11.63	6.49	14.22	29.95	35.29	2.42	7.3	16.1	33.9	40.0	2.7	do	1199
1200	Cut when half of bloom had turned brown; grown on blue grass soil.*	13.75	7.09	9.89	24.07	43.43	1.77	8.2	11.5	27.9	50.3	2.1	Ky. Ex. Sta. Bul. 5, 1886, p. 14	1200
1201	Time of cutting unknown	8.05	7.28	13.81	23.16	44.68	3.02	7.9	14.9	25.2	48.7	3.3	Mo. Col. Farm Bul. 27, 1887, p. 6	1201
1202	Do	14.00	5.20	13.52	27.50	34.51	5.27	6.0	15.7	31.9	40.2	6.2	Ark. Ex. Sta. Rep., 1888, p. 132	1202
1203	Second crop	8.64	7.28	10.32	18.04	52.21	3.51	7.9	11.3	19.8	57.2	3.8	Colo. Ex. Sta. Bul. 8, 1889	1203
1204	Cut June 14; full bloom; 1 head out of 5 brown. *a*	31.27	6.46	10.82	18.25	27.28	5.92	9.5	15.8	26.5	39.6	8.6	Ill. Ex. Sta. Bul. 5, 1889	1204
1205	Do. *a*	28.67	6.03	11.23	18.30	30.51	5.26	8.5	15.8	25.4	42.9	7.4	do	1205
1206	Do. *a*	29.12	5.64	11.47	19.22	28.96	5.64	8.0	16.2	27.2	40.6	8.0	do	1206

1207	Do. *a*	29.77	5.79	11.06	17.87	30.57	4.94	8.3	15.8	25.5	43.4	7.0	....do	1207
	Average *a h i j*	**29.71**	**6.00**	**11.17**	**18.37**	**29.29**	**5.46**	**8.5**	**15.9**	**26.1**	**41.7**	**7.8**		
1208	Cut June 21, 22; three quarters of the heads dead; few lower leaves brown. *a*	30.40	5.73	10.66	20.85	28.43	3.93	8.2	15.3	30.0	40.8	5.7	....do	1208
1209	Do. *a*	22.31	6.16	12.24	21.14	33.25	4.90	7.9	15.8	27.2	42.8	6 3	....do	1209
1210	Do. *a*	22.83	6.40	12.16	19.77	34.36	4.48	8.3	15.8	25.6	44.5	5.8	....do	1210
1211	Do. *a*	25.86	5.83	11.07	20.46	30.30	5.90	7.9	15.8	27.6	40.8	7.9	....do	1211
	Average *a h i j*	**25.35**	**6.04**	**11.68**	**20.61**	**31.58**	**4.74**	**8.1**	**15.6**	**27.6**	**42.3**	**6.4**		
1212	Time of cutting unknown	8.35	7.16	12.38	24.62	41.79	5.70	7.9	13.6	26.8	45.5	6.2	Ind. Ex. Sta. Bul. 24, 1889	1212
1213	Cut June 21; in bloom *c*	6.02	8.30	13.82	28.11	41.27	2.48	8.9	14.7	29.9	43.9	2.6	Mass. State Ex. Sta. Rep., 1889, p. 163	1213
	All analyses, common red clover, excluding Nos. 1195–1200. Maximum	31.27	8.33	20.75	35.65	52.21	5.92	9.5	23.3	38.6	57.2	8.6		
	Minimum	6.02	3.88	10.00	15.60	27.28	1.47	4.6	10.9	17.5	39.0	1.8		
	Average	**15.26**	**6.15**	**12.32**	**24.75**	**38.20**	**3.32**	**7.3**	**14.5**	**29.1**	**45.2**	**3.9**		
	Five analyses in bloom† Maximum	31.27	8.30	15.37	28.11	41.27	5.92	9.5	16.7	29.9	47 0	8.1		
	Minimum	6.02	5.64	10.82	17.87	27.28	2.48	7.1	14.6	25.1	39.6	2.6		
	Average	**20.78**	**6.59**	**12.38**	**21.85**	**33.92**	**4.48**	**8.3**	**15.6**	**27.5**	**43.0**	**5.6**		
	Mammoth red clover (*Trifolium medium*):													
1214	Cut June 30; about 1 head in 10 in bloom; others small and green. *a h i j*	23.72	5.71	10.34	23.88	31.02	5.33	7.5	13.6	31.2	40.7	7.0	Ill. Ex. Sta. Bul. 5, 1889	1214
1215	Do. *a h i j*	29.44	5.78	9.88	21.63	28.57	4.70	8.2	14.0	30.6	40.5	6.7	....do	1215
1216	Do. *a h i j*	24.12	5.99	10.60	23.00	31.22	5.07	7.9	14.0	30.3	41 1	6.7	....do	1216
1217	Do. *a h i j*	27.96	5.74	9.90	20.91	30.96	4.53	8.0	13 8	29.0	42.9	6.3	....do	1217
	Average	**26.31**	**5.80**	**10.20**	**22.35**	**30.44**	**4.90**	**7.9**	**13.8**	**30.3**	**41.3**	**6.7**		
1218	Cut July 11; half the heads in full bloom; some turning brown; lodged. *a h i j*	26.70	5.20	9.62	25.08	28.86	4.56	7.1	13.1	34.2	39.4	6.2	....do	1218
1219	Do. *a h i j*	24.08	4.96	9.96	27.24	28.64	5.12	6 5	13.1	35.9	37.7	6 8	....do	1219
1220	Do. *a h i j*	26.60	4.45	8.99	25.06	31.60	3.30	6.1	12.3	34.1	43.0	4.5	....do	1220
	Average	**25.79**	**4.88**	**9.52**	**25.78**	**29.71**	**4.32**	**6.6**	**12.8**	**34.8**	**40.0**	**5.8**		
1221	Cut July 23; three fourths to four fifths of the heads brown; seed ripe; lower leaves dead. *a h i j*	19.62	4.86	9.14	26.02	36.20	4.16	6.0	11.4	32.4	45.0	5.2	....do	1221
1222	Do. *a h i j*	18.34	5.71	9.29	24.00	38.72	3.94	7.0	11.4	29.4	47.4	4.8	....do	1222
1223	Do. *a h i j*	20.63	4.99	9.03	29.39	31.73	4.23	6.3	11.4	37.0	40.0	5.3	....do	1223
	Average	**19.53**	**5.18**	**9.15**	**26.50**	**35.54**	**4.10**	**6.4**	**11.4**	**32.9**	**44.2**	**5.1**		

* Salted when stored.

† Nos. 1177, 1185, 1204, 1207, 1213.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	HAY AND OTHER DRIED COARSE FODDERS—Continued.													
	HAY OF MIXED MEADOW GRASSES—continued.													
	Unclassified:	%	%	%	%	%	%	%	%	%	%	%		
1357	Cut first week in July; grown on old meadow; in grass 10 to 15 years. *a k*	14.30	4.56	6.50	25.89	47.33	1.43	5.3	7.6	30.2	55.2	1.7	Conn. State Ex. Sta. Rep., 1879, p. 79.	1357
1358	Cut fourth week in June; grown on old meadow. *a k*	14.30	4.23	7.02	27.82	45.00	1.63	4.9	8.2	32.5	52.5	1.9	....do....	1358
1359	Cut in 1884	18.00	4.54	5.74	32.19	36.88	2.65	5.5	7.0	39.3	45.0	3.2	N. Y. State Ex. Sta. Rep., 1885, p. 303	1359
1360	Cut in 1884; many daisies	16.85	4.66	4.94	35.89	35.58	2.08	5.6	5.9	43.2	42.8	2.5	....do....	1360
1361	Cut in 1885	12.97	5.22	7.02	34.35	38.17	2.27	6.0	8.1	39.5	43.8	2.6	....do....	1361
1362	Time of cutting unknown	14.77	4.85	7.88	35.38	34.41	2.71	5.7	9.2	41.5	40.4	3.2	....do....	1362
1363	Do. *a*	15.41	5.26	7.56	29.91	39.02	2.84	6.2	8.9	35.4	46.1	3.4	N. Y. State Ex. Sta. Rep., 1888, p. 237.	1363
1364	Do. *a*	14.95	4.97	6.38	27.55	43.65	2.50	5.8	7.5	32.5	51.3	2.9	N. Y. State Ex. Sta. Rep., 1888, p. 238.	1364
	HAY OF MIXED GRASSES AND LEGUMES.													
1365	Timothy (*Phleum pratense*) and red clover (*Trifolium pratense*).	11.37	4.81	6.38	29.53	45.19	2.72	5.4	7.2	33.2	51.2	3.0	N. J. Ex. Sta. Rep., 1880, p. 46	1365
1366	Do	8.20	3.90	5.50	30.80	48.90	2.70	4.2	6.0	33.6	53.3	2.9	Agr. of Me., 1882, p. 300	1366
	Timothy (*Phleum pratense*) and Alsike clover (*Trifolium hybridum*):													
1367	Cut when partly out of bloom	11.10	6.27	10.06	30.36	39.24	2.97	7.1	11.3	34.1	44.2	3.3	Me. Ex. Sta. Rep., 1886–'87, p. 68.	1367
1368	Do	10.18	6.36	10.00	30.15	40.36	2.95	7.1	11.1	33.6	44.9	3.3	....do....	1368
	Mixed grasses and clovers:													
1369	Seeded with blue grass, timothy, redtop and white clover, and mown 3 years; from dry upland; cut May 30. *a k*	14.30	5.30	14.42	19.66	43.23	3.09	6.2	16.8	23.0	50.4	3.6	Conn. State Ex. Sta. Rep., 1879, p. 79.	1369
1370	Seeded with red clover; from dry upland; cut June 5. *a k*	14.30	6.49	11.62	23.06	42.07	2.46	7.6	13.6	26.9	49.0	2.9	....do....	1370
1371	Much blue grass and timothy; considerable red and white clover; from dry upland; plowed 40 years; cut first week in July. *a k*	14.30	5.10	10.60	24.90	42.40	2.70	6.0	12.4	29.1	49.3	3.2	....do....	1371
1372	Yellow clover and timothy, with some redtop and wire grass (*Poa compressa*); cut July 1. *a k*	14.30	4.74	9.06	28.19	42.21	1.50	5.5	10.6	32.9	49.2	1.8	....do....	1372

1373	Chiefly timothy and redtop; some red clover and white weed (*Chrysanthemum Leucanthemum*); cut Aug. 1. *a k*	14.30	5.10	9.00	24.90	44.90	1.80	6.0	10.5	30.1	52.3	2.1	.....do.....	1373
1374	Timothy, clover, redtop, and bushes, baled	15.95	3.93	6.20	26.80	45.13	2.19	4.6	7.4	31.6	53.8	2.6	Conn. State Ex. Sta. Rep., 1886, p. 118.	1374
1375	Coarse in quality	15.11	3.17	6.44	29.77	43.73	1.78	3.8	7.5	35.1	51.5	2.1	Conn. State Ex. Sta. Rep., 1887, p. 100.	1375
1376	Rowen of mixed grasses and clovers	14.53	6.30	11.80	28.22	35.84	3.31	7.4	13.8	33.0	41.9	3.9	N. Y. State Ex. Sta. Rep., 1884, p. 330.	1376
1377	Rowen of mixed grasses and clovers; not as much clover as preceding.	14.13	6.16	10.36	29.38	36.88	3.09	7.2	12.1	34.2	42.9	3.6	.....do.....	1377
1378	Same as No. 1376, but exposed to weather 1 month; average sample. *k*	14.53	4.15	10.42	35.14	33.28	2.48	4.8	12.2	41.1	39.0	2.9	N. Y. State Ex. Sta. Rep., 1885, p. 303.	1378
1379	Same as No. 1376, but exposed to weather 1 month; poorest sample. *k*	14.53	4.64	11.73	34.79	31.79	2.52	5.4	13.9	40.7	37.0	3.0	.....do.....	1379
1380	Rowen, contained much clover. *c*	8.84	9.57	12.03	26.86	39.92	2.78	10.5	13.2	29.5	43.7	3.1	Mass. State Ex. Sta. Rep., 1887, p. 95.	1380
1381	Vetch (*Vicia sativa*) and oats (*Avena sativa*)	9.75	7.11	15.50	17.20	46.39	4.05	7.9	17.2	19.0	51.4	4.5	Mass. State Ex. Sta. Rep., 1884, p. 93.	1381
	UPLAND HAY.													
	Upland hay:													
1382	Time of cutting unknown	11.35	5.68	6.79	27.22	46.93	2.03	6.4	7.7	30.7	52.9	2.3	Mass. State Ex. Sta. Rep., 1885, p. 98.	1382
1383	Do	10.60	6.78	8.34	24.34	47.46	2.48	7.6	9.3	27.2	53.1	2.8	Mass. State Ex. Sta. Rep., 1885, p. 90.	1383
1384	Do	16.04	3.79	4.83	26.28	46.88	2.18	4.5	5.8	31.3	55.8	2.6	N. Y. State Ex. Sta. Rep., 1886, p. 365.	1384
1385	Do	19.00	4.49	6.52	23.72	44.92	1.35	5.5	8.0	29.2	55.6	1.7	Wis. Ex. Sta. Rep., 1886, p. 99	1385
1386	Do	6.48	2.08	8.23	35.85	44.30	3.06	2.2	8.8	38.3	47.4	3.3	Vt. Ex. Sta. Rep., 1887, p. 138	1386
1387	Do*	13.89	5.52	9.84	27.40	41.86	2.49	6.4	11.4	31.7	47.6	2.9	Ark. Ex. Sta. Rep., 1888, p. 132	1387
1388	Do	8.06	6.16	9.29	31.10	43.56	1.83	6.7	10.1	34.8	47.4	2.0	Mass. State Ex. Sta. Rep., 1889, p. 32.	1388
1389	Do	11.84	6.86	6.06	35.75	37.91	1.58	7.8	6.9	40.6	42.9	1.8	Miss. Ex. Sta. Bul. 8, 1889	1389
1390	Cut July 10; early cut hay	12.10	3.59	7.19	25.70	49.14	2.28	4.1	8.2	29.2	55.9	2.6	N. H. Ex. Sta. Bul. 8, 1889	1390
1391	Cut July 31; late-cut hay	8.63	4.34	7.18	26.56	50.83	2.56	4.7	7.8	29.1	55.6	2.8	.....do.....	1391
1392	Rowen, sun-dried; analysis No. 711 is same rowen after being in silo 11 months.	19.71	7.22	11.80	23.63	33.66	3.98	9.0	14.7	29.4	41.9	5.0	Mass. State Ex. Sta. Rep., 1886, p. 66.	1392
1393	Rowen	10.95	5.79	12.64	28.04	38.13	4.45	6.5	14.2	31.5	42.8	5.0	Mass. Ex. Sta. Rep., 1889, p. 35	1393
	SWAMP HAY.													
	Swamp hay:													
1394	Time of cutting unknown	14.30	3.30	7.80	31.60	39.90	3.10	3.9	9.1	36.9	46.5	3.6	Conn. Bd. Agr Rep., 1872, p. 422	1394
1395	Chiefly *Carex stricta*, *C. stellulata*, var. *scirpoides*, *Eleocharis tenuis*. *k*	14.30	5.40	6.70	26.20	46.10	1.30	6.3	7.8	30.6	53.8	1.5	Conn. State Ex. Sta. Rep., 1879, p. 80.	1395
1396	Cut Aug. 15, 1877 *k*	14.30	8.56	7.27	23.22	44.49	2.16	10.0	8.5	27.1	51.9	2.5	.....do.....	1396
1397	Cut Aug. 7 to 14, 1877 *k*	7.83	12.11	8.81	23.58	45.67	2.00	13.1	9.5	25.6	49.6	2.2	N. J. Ex. Sta. Rep., 1886, p. 164	1397
1398	Bog hay *b*	8.33	4.54	6.51	26.66	51.67	2.29	4.9	7.1	29.1	56.4	2.5	.....do.....	1398
1399	From a cranberry bog *b*	17.92	9.63	5.03	19.37	47.24	0.81	11.8	6.1	23.6	57.5	1.0	S. C. Ex. Sta. Rep., 1888, p. 134	1399
1400	Marsh hay *a c*	7.86	4.20	7.00	27.55	49.97	3.60	4.6	7.6	29.9	54.0	3.9	Mich. Ex. Sta. Bul. 49, 1889	1400
1401	Do	8.01	6.16	8.74	32.75	42.60	1.74	6.7	9.5	35.6	46.3	1.9	Mass. State Ex. Sta. Rep., 1889, p. 142	1401
	Low meadow hay													
	SALT MARSH HAY.													
	Salt marsh hay:													
1402	Cut 1872; contained spike grass (*Brizopyrum spicatum*), rush salt grass (*Spartina juncea*) and spear grass (*Glyceria maritima*).	7.93	6.29	7.09	31.40	44.39	2.90	6.8	7.7	34.1	48.3	3.1	Bussey Inst. Bul., 1874–'76, p. 341	1402

* Adds 101 (fresh or air-dry material).

		In fresh or air-dry material.						Calculated to water-free substance.						
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	References to publications.	
	ROOTS, BULBS, TUBERS, AND OTHER VEGETABLES—Continued.													
	Carrots—Continued.													
	Early Long Orange, collected—	%	%	%	%	%	%	%	%	%	%	%		
1528	Oct. 15; length, 30 cm.; breadth, 3.4 cm.; average weight of one, 157 grams.	84.30	1.55	1.66	1.25	10.74	0.50	9.9	10.5	8.0	68.4	3.2	U. S. Dept. Agr. Rep., 1883, p. 239	1528
1529	Oct. 25; length, 51 cm.; breadth, 9.6 cm.; average weight of one, 697 grams.	86.89	1.34	1.99	1.55	7.70	0.62	10.3	15.1	11.7	58.3	4.6	do	1529
1530	Variety unknown	86.52	1.05	0.84	0.99	10.40	0.20	7.8	6.2	7.3	77.2	1.5	Ohio Ex. Sta. Rep., 1884, p. 212	1530
1531	Danvers	87.48	0.61	1.21	0.95	9.26	0.49	4.9	9.6	7.6	74.0	3.9	Mass. State Ex. Sta. Rep., 1885, p. 80	1531
1532	Yellow Danvers	91.13	1.00	1.08	1.41	5.09	0.29	11.3	12.2	15.9	57.4	3.2	N. Y. State Ex. Sta. Rep., 1885, p. 306	1532
1533	Variety unknown	90.02	1.12	0.89	1.07	6.71	0.19	11.2	8.9	10.8	67.2	1.9	Mass. State Ex. Sta. Rep., 1887, p. 30	1533
1534	Danvers	90.05	0.82	0.80	1.03	7.13	0.17	8.3	8.0	10.2	71.8	1.7	Mass. State Ex. Sta. Rep., 1889, p. 34	1534
	Analyses, Nos. 1521, 1522, 1530–1535. Maximum	91.13	1.34	1.99	2.32	10.40	0.71	11.3	15.1	19.1	77.2	5.9		
	Analyses, Nos. 1521, 1522, 1530–1535. Minimum	86.52	0.61	0.80	0.86	5.09	0.17	4.9	6.2	7.3	56.4	1.5		
	Analyses, Nos. 1521, 1522, 1530–1535. Average	**88.59**	**1.02**	**1.14**	**1.27**	**7.56**	**0.42**	**8.8**	**10.0**	**11.2**	**66.3**	**3.7**		
	Onions:													
1535	White *a*	85.26	0.68	2.28	0.76	10.80	0.22	4.6	15.5	5.2	73.2	1.5	U. S. Dept. Agr. Rep., 1881–'82, p. 555	1535
	Giant Della Rocca, collected—													
1536	June 29; average weight of one, 3 grams, 22.6 per cent of whole plant. *a*	91.05	0.95	1.12	1.22	5.06	0.60	10.7	12.5	13.6	56.5	6.7	U. S. Dept. Agr. Rep., 1883, p. 240	1536
1537	July 10; breadth, 3.7 cm.; average weight of one, 15 grams, 45.4 per cent of whole plant. *a*	87.19	1.20	1.57	1.35	7.87	0.82	9.4	12.2	10.5	61.5	6.4	do	1537
1538	July 20; breadth, 4 cm.; average weight of one, 30 grams, 62.2 per cent of whole plant. *a*	93.52	0.62	1.10	0.63	3.77	0.36	9.6	17.6	9.8	57.5	5.5	do	1538
1539	Potato *a*	86.48	0.49	0.77	0.73	11.28	0.25	3.6	5.7	5.4	83.4	1.9	U. S. Dept. Agr. Rep., 1883, p. 235	1539
1540	Large Red Wethersfield	90.32	0.42	1.04	0.59	7.39	0.24	4.3	10.8	6.1	76.3	2.5	N. Y. State Ex. Sta. Rep., 1883, p. 151	1540
1541	Yellow Danvers	88.20	0.48	1.14	0.71	9.23	0.24	4.0	9.7	6.0	78.2	2.1	do	1541
1542	Top onions	81.53	0.69	2.11	0.74	14.69	0.24	3.7	11.4	4.0	79.6	1.3	do	1542
	Analyses, Nos. 1536, 1539–1543. Maximum	93.52	0.69	2.28	0.76	14.69	0.36	9.6	17.6	9.8	79.6	5.5		
	Analyses, Nos. 1536, 1539–1543. Minimum	81.53	0.42	0.77	0.59	3.77	0.22	3.6	5.7	4.0	57.5	1.3		
	Analyses, Nos. 1536, 1539–1543. Average	**87.55**	**0.57**	**1.40**	**0.69**	**9.53**	**0.26**	**4.5**	**11.3**	**5.5**	**76.5**	**2.2**		

	Squashes:													
1543	**Marrow (flesh)**	*89.65*	0.73	0.96	1.19	7.13	0.34	7.1	9.2	11.5	68.8	3.3	**Bussey Inst. Bul., 1877, p. 88**	1543
1544	**Hubbard (flesh)**	*85.28*	*0.91*	*0.69*	*0.99*	*11.98*	*0.15*	*6.2*	*4.5*	*6.8*	*81.5*	*1.0*	**.....do**	1544
1545	**Crooked Neck (flesh)**	89.33	0.53	*1.11*	*0.95*	*8.04*	*0.04*	*4.9*	*10.4*	*8.9*	*75.4*	*0.4*	**.....do**	1545
1546	**Marrow (rind)**	85.65	1.49	2.81	2.86	6.43	0.76	10.4	19.6	19.9	44.8	5.3	**.....do**	1546
1547	**Hubbard (rind)**	79.01	1.13	2.75	3.89	12.42	0.80	5.4	13.1	18.5	59.2	3.8	**Bussey Inst. Bul., 1877, p. 89**	1547
1548	**Crooked Neck (rind)**	81.35	1.02	2.94	2.82	11.28	0.59	5.5	15.7	15.1	60.4	3.3	**Bussey Inst. Bul., 1877, p. 90**	1548
1549	**Marrow (seeds and stringy matter)**	72.35	1.70	5.75	4.48	7.97	7.75	6.1	20.8	16.2	28.8	28.1	**Bussey Inst. Bul., 1877, p. 88**	1549
1550	**Hubbard (seeds and stringy matter)**	66.72	1.64	6.07	6.24	11.77	7.56	4.9	18.2	18.7	35.5	22.7	**Bussey Inst. Bul., 1877, p. 89**	1550
1551	**Crooked Neck (seeds and stringy matter)**	83.32	0.83	3.99	2.05	6.20	3.61	4.9	23.9	12.2	37.4	21.6	**Bussey Inst. Bul., 1877, p. 90**	1551
1552	**Turban, from Washington market *a***	95.18	0.38	0.64	0.53	2.95	0.32	7.9	13.3	11.0	61.1	6.7	**U. S. Dept. Agr. Rep., 1881–'82, p. 555.**	1552
1553	**Crooked Neck, from Washington market *a***	94.58	0.42	0.68	0.54	3.54	0.24	7.7	12.5	9.9	65.5	4.4	**.....do**	1553
	Average of the flesh	**88.09**	**1.72**	**0.92**	**1.04**	**9.05**	**0.18**	**6.1**	**8.1**	**9.0**	**75.2**	**1.6**		
	Average of the rind	**82.00**	**1.21**	**2.84**	**3.19**	**10.04**	**0.72**	**7.1**	**16.1**	**18.1**	**54.6**	**4.1**		
	Average of the seeds and stringy matter.	**74.03**	**1.39**	**5.27**	**4.26**	**8.64**	**6.31**	**5.3**	**21.0**	**15.7**	**33.9**	**24.1**		
	Pumpkins:													
1554	Common round yellow (flesh)	92.41	0.71	0.87	1.11	4.80	0.10	9.3	11.5	14.6	63.3	1.3	**Bussey Inst. Bul., 1877, p. 83**	1554
1555	Smaller round yellow (flesh)	94.37	0.63	0.95	0.86	3.05	0.14	11.6	13.8	15.9	56.2	2.5	**.....do**	1555
1556	Common round yellow (rind)	84.44	1.50	2.90	3.92	6.75	0.49	9.6	18.7	25.2	43.4	3.1	**Bussey Inst. Bul., 1877, p. 84**	1556
1557	Smaller round yellow (rind)	88.01	1.23	2.63	2.97	4.67	0.49	10.3	22.0	24.7	38.9	4.1	**.....do**	1557
1558	Common round yellow (seeds and stringy matter).	75.94	1.66	6.32	3.74	5.21	7.13	6.9	26.3	15.5	21.7	29.6	**.....do**	1558
1559	Smaller round yellow (seeds and stringy matter).	77.79	1.36	5.68	4.12	4.34	6.71	6.1	25.6	18.5	19.6	30.2	**.....do**	1559
1560	Variety unknown	92.27	0.63	1.11	1.49	4.34	0.16	8.2	14.4	19.2	56.1	2.1	**N. Y. State Ex. Sta. Rep., 1885, p. 306.**	1560
	Average of the flesh	**93.39**	**0.67**	**0.91**	**0.98**	**3.93**	**0.12**	**10.4**	**12.7**	**15.3**	**59.7**	**1.9**		
	Average of the rind	**86.23**	**1.36**	**2.76**	**3.45**	**5.71**	**0.49**	**10.0**	**20.4**	**24.9**	**41.1**	**3.6**		
	Average of the seeds and stringy matter.	**76.86**	**1.51**	**6.00**	**3.93**	**4.78**	**6.92**	**6.5**	**25.9**	**17.0**	**20.6**	**30.0**		
	Cucumbers:													
1561	From Washington market *a*	95.70	0.46	0.83	0.85	1.95	0.21	10.7	19.4	19.6	43.3	5.0	**U. S. Dept. Agr. Rep., 1883, p. 234**	1561
1562	From Washington market, weight 160.2 grams apiece. *a*	96.29	0.45	0.79	0.53	1.72	0.22	12.1	21.5	14.3	46.3	5.8	**U. S. Dept. Agr. Rep., 1881–'82, p. 555.**	1562
	Average	**95.99**	**0.46**	**0.81**	**0.69**	**1.83**	**0.22**	**11.5**	**20.3**	**17.3**	**45.4**	**5.5**		
	Cabbages:													
1563	English cabbage *a*	93.59	0.72	2.06	1.44	2.00	0.19	11.2	32.1	22.4	31.2	3.1	**U. S. Dept. Agr. Rep., 1881–'82, p. 555.**	1563
	Henderson, entire head, collected—													
1564	June 2; height, 29 cm. *a*	88.39	3.43	2.71	0.94	3.86	0.67	29.5	23.3	8.1	33.3	5.8	**U. S. Dept. Agr. Rep., 1883, p. 240**	1564
1565	June 26; height 33 cm.; average weight of one, 466 grams; beginning to head. *a*	87.39	2.55	2.94	1.32	5.11	0.69	20.2	23.3	10.5	40.5	5.5	**.....do**	1565
1566	July 3; height, 30 cm.; average weight of one, 549 grams. *a*	86.01	2.70	2.62	1.55	6.38	0.74	19.3	18.7	11.1	45.6	5.3	**.....do**	1566
1567	July 10; height, 30 cm.; average weight of one, 925 grams; well set. *a*	87.46	2.08	2.72	1.51	5.69	0.54	16.6	21.7	12.1	45.3	4.3	**.....do**	1567

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen free extract.	Fat.		
	GRAIN AND OTHER SEEDS—Continued.													
	Corn (maize) kernels, flint varieties:	%	%	%	%	%	%	%	%	%	%	%		
1729	Blount Prolific, raised in Colorado	10.59	1.50	9.80	2.35	70.19	5.66	1.8	10.9	2.6	78.4	6.3	U. S. Dept. Agr., 1883, p. 216	1729
1730	Vermont White Cap, raised in Connecticut.	10.86	1.53	11.06	1.04	71.22	4.29	1.7	12.4	1.2	79.9	4.8	Conn. State Ex. Sta. Rep., 1878, p. 67.	1730
1731	Rowley, raised in Connecticut	11.00	1.61	11.63	0.78	70.15	4.83	1.8	13.1	0.9	78.8	5.4	....do	1731
1732	Yellow or Canada, 8-rowed, raised in Connecticut.	15.10	1.36	10.01	1.24	66.99	5.31	1.6	11.6	1.7	78.9	6.2	Middletown (Conn.) Ex. Sta. Rep., 1877–'78, p. 29.	1732
1733	Old-Fashioned Yellow, raised in Connecticut.	10.58	1.43	9.81	1.39	72.11	4.68	1.6	11.0	1.6	80.6	5.2	Conn. State Ex. Sta. Rep., 1879, p. 88.	1733
1734	King Philip, raised in Connecticut	15.97	1.35	10.31	1.37	66.50	4.50	1.6	12.3	1.6	79.1	5.4	Conn. State Ex. Sta. Rep., 1880, p. 81.	1734
1735	Common yellow, raised in Connecticut	15.77	1.26	10.00	1.47	67.06	4.44	1.5	11.9	1.7	79.6	5.3	....do	1735
1736	White flint, raised in Connecticut	16.82	1.19	8.94	1.32	67.84	3.89	1.4	10.7	1.6	81.6	4.7	....do	1736
1737	Flint, raised in Connecticut	18.16	1.43	9.60	1.47	64.95	4.39	1.8	11.7	1.8	79.4	5.3	Conn. State Ex. Sta. Rep., 1881, p. 83.	1737
1738	Canada Snub corn, raised in Connecticut	16.66	1.03	8.94	0.78	68.55	4.04	1.2	10.7	0.9	82.3	4.9	Conn. State Ex. Sta. Rep., 1884, p. 106.	1738
1739	Canada Yellow corn, raised in Connecticut	16.50	1.32	9.87	0.91	66.58	4.82	1.6	11.8	1.1	79.7	5.8	....do	1739
1740	Rhode Island White Cap, raised in Connecticut.	8.71	1.23	11.06	1.07	72.28	5.65	1.3	12.2	1.2	79.2	6.1	Conn. State Ex. Sta. Rep., 1887, p. 119.	1740
	Average, varieties raised in Connecticut.	**14.19**	**1.34**	**10.11**	**1.17**	**68.57**	**4.62**	**1.5**	**11.8**	**1.3**	**80.0**	**5.4**		
1741	Flint corn, raised in Maine	19.60	1.40	7.91	1.78	65.06	4.25	1.7	9.8	2.2	81.0	5.3	Maine Ex. Sta. Rep., 1885–'86, p. 51	1741
1742	Wheeler Prolific, raised in Massachusetts	12.69	1.39	12.06	1.82	67.46	4.58	1.6	13.8	2.1	77.3	5.2	Mass. Agr., 1879–'80, p. 238	1742
1743	Clark, raised in Massachusetts	12.12	1.64	12.12	2.46	66.91	4.75	1.9	13.8	2.8	76.1	5.4	Mass. Agr., 1879–'80, p. 239	1743
1744	Tip, raised in Massachusetts	8.86	1.57	12.85	2.53	68.93	5.26	1.7	14.1	2.8	75.6	5.8	....do	1744
1745	Canada, raised in Massachusetts	13.44	1.27	12.02	2.40	66.51	4.56	1.5	13.9	2.8	76.5	5.3	Mass. Agr., 1879–'80, p. 241	1745
1746	Canada Dutton, raised in Massachusetts	14.36	1.42	10.33	2.38	66.51	5.00	1.7	12.1	2.8	77.6	5.8	Mass. Agr., 1879–'80, p. 242	1746
1747	Massachusetts Red, raised in Massachusetts.	11.95	1.10	12.06	2.02	69.47	3.40	1.3	13.7	2.3	78.8	3.9	Communicated by analyst, S. P. Sharples; not published.	1747
1748	Massachusetts White, raised in Massachusetts.	10.22	1.44	9.22	1.47	74.24	3.40	1.6	10.3	1.7	82.6	3.8	....do	1748
1749	Waushakum, raised in Massachusetts	13.05	1.29	10.69	1.11	69.80	4.06	1.5	12.3	1.3	80.2	4.7	U. S. Census, 1[illegible], vol. III, p. 415	1749
1750	No. 1749, roasted, raised in Massachusetts	4.53	1.41	11.06	1.35	76.74	4.91	1.5	11.6	1.4	80.4	5.1	....do	1750
1751	Topover, raised in Massachusetts	11.55	1.30	12.39	1.73	67.18	5.85	1.5	14.0	2.0	75.9	6.6	Mass. Ex. Sta. Rep., 1885, p. 81	1751
1752	Canada, raised in Massachusetts	9.76	1.60	10.38	1.97	70.53	5.76	1.8	11.5	2.2	78.1	6.4	Mass. Ex. Sta. Rep., 1887, p. 99	1752
1753	Adams White, 12-rowed, raised in Massachusetts.	10.96	1.39	7.90	1.98	72.99	4.78	1.6	8.9	2.2	81.9	5.4	....do	1753
	Average, varieties raised in Massachusetts.	**11.12**	**1.40**	**11.09**	**1.93**	**69.77**	**4.69**	**1.6**	**12.4**	**2.1**	**78.6**	**5.3**		

1754	Smut Nose, raised in Michigan	12.90	1.54	11.81	2.00	66.81	4.94	1.8	13.6	2.3	76.6	5.7	Mich. Bd. Agr. Rep., 1878, p. 409	1754
1755	Do	13.26	1.49	11.51	2.49	66.11	5.14	1.7	13.3	2.9	76.2	5.9	....do	1755
1756	Eight-rowed flint, raised in Michigan	13.45	1.43	12.00	2.26	66.03	4.83	1.7	13.9	2.6	76.3	5.5	....do	1756
1757	Sanford, raised in Michigan	13.37	1.37	10.69	2.10	67.41	5.06	1.6	12.3	2.4	77.8	5.9	....do	1757
	Average, varieties raised in Michigan	**13.24**	**1.46**	**11.50**	**2.21**	**66.60**	**4.99**	**1.7**	**13.2**	**2.5**	**76.8**	**5.8**		
1758	White flint, raised in Missouri	7.60	1.55	11.90	2.50	71.52	4.93	1.7	12.8	2.7	77.5	5.3	U. S. Dept. Agr. Rep., 1883, p. 215	1758
1759	Pennsylvania, raised in Missouri	8.25	1.55	9.38	1.90	74.27	4.05	1.7	10.9	2.1	80.9	4.4	....do	1759
1760	Early Canada, raised in Missouri	8.70	1.45	10.68	2.00	72.50	4.67	1.6	11.7	2.2	79.4	5.1	....do	1760
1761	Adams, raised in New Hampshire *	8.61	1.57	10.50	1.19	73.30	4.83	1.7	11.5	1.3	80.2	5.3	U. S. Dept. Agr. Rep., 1878, p. 149	1761
1762	Canada, raised in New Hampshire*	8.27	1.72	11.36	1.26	71.79	5.60	1.9	12.4	1.4	78.3	6.0	....do	1762
1763	Small 12-rowed, raised in New Hampshire*	11.48	1.34	10.50	1.09	69.56	6.03	1.5	11.9	1.2	78.6	6.8	....do	1763
1764	State Fair Premium, raised in New Hampshire.*	10.19	1.78	10.82	1.06	70.86	5.29	2.0	12.1	1.2	78.9	5.8	....do	1764
1765	Large Premium, raised in New Hampshire*	10.00	1.46	11.36	1.09	70.57	5.52	1.6	12.6	1.2	78.4	6.2	....do	1765
1766	Board of Agriculture, raised in New Hampshire. *	11.09	1.31	11.55	0.82	70.55	4.68	1.5	13.0	0.9	79.4	5.2	....do	1766
1767	King Philip, raised in New Hampshire *	10.23	1.34	12.08	1.01	67.79	7.05	2.0	13.5	1.1	75.5	7.9	....do	1767
1768	Small 8-rowed, raised in New Hampshire *	11.05	1.57	13.65	1.30	67.63	4.80	1.8	15.3	1.5	76.0	5.4	U. S. Dept. Agr. Rep., 1878, p. 148	1768
1769	Miscegenation (white and blue), raised in New Hampshire.*	9.92	1.63	11.72	1.05	70.35	5.33	1.8	13.0	1.2	78.1	5.9	....do	1769
1770	Pitch Knot, raised in New Hampshire*	11.24	1.52	11.20	1.04	69.74	5.26	1.7	12.6	1.2	78.6	5.9	....do	1770
1771	Tom Thumb (yellow), raised in New Hampshire. *	9.05	1.60	12.60	1.33	69.53	5.89	1.7	13.9	1.4	76.5	6.5	....do	1771
	Average, varieties raised in New Hampshire.	10.10	1.53	11.58	1.11	70.20	5.48	1.7	12.8	1.2	78.2	6.1		
1772	Corn, upper ear, raised in New York	10.66	1.21	10.77	1.16	71.02	5.18	1.3	11.9	1.3	79.7	5.8	N. Y. State Ex. Sta. Rep., 1883, p. 151.	1772
1773	Corn, lower ear, raised in New York	9.37	1.14	9.74	1.12	73.42	5.21	1.3	10.8	1.2	81.0	5.7	....do	1773
1774	Corn, upper ear, raised in New York	8.50	1.27	10.86	0.67	74.00	4.70	1.4	11.8	0.8	80.9	5.1	....do	1774
1775	Corn, lower ear, raised in New York	8.82	1.26	9.91	1.11	74.54	4.36	1.4	11.0	1.2	81.6	4.8	....do	1775
1776	Wanshakum, raised in New York	11.91	1.38	11.12	1.91	68.66	5.02	1.5	12.6	2.2	78.0	5.7	N. Y. State Ex. Sta. Rep., 1884, p. 331.	1776
1777	Oregon White, raised in Oregon *	9.25	1.46	7.88	1.26	73.07	7.08	1.1	8.7	1.4	81.0	7.8	U. S. Dept. Agr. Rep., 1878, p. 148	1777
1778	Compton Early, raised in Pennsylvania *	6.59	1.64	9.90	2.09	74.48	5.30	1.8	10.6	2.2	79.7	5.7	U. S. Dept. Agr. Rep., 1878, p. 149	1778
1779	White Prolific, raised in Pennsylvania*	8.96	1.43	8.05	1.25	74.49	5.82	1.6	8.8	1.4	81.8	6.4	U. S. Dept. Agr. Rep., 1878, p. 215	1779
1780	Improved Prolific, raised in Tennessee*	7.58	1.23	9.29	2.65	74.16	5.09	1.3	10.1	2.9	80.2	5.5	U. S. Dept. Agr. Rep., 1878, p. 148	1780
1781	Wild Goose, raised in Texas*	8.40	1.45	10.33	2.20	72.71	4.91	1.6	11.1	2.4	78.6	5.3	U. S. Dept. Agr. Rep., 1883, p. 215	1781
1782	Vermont, raised in Vermont	8.64	1.45	10.14	1.38	72.76	5.63	1.6	11.1	1.5	79.6	6.2	U. S. Dept. Agr. Rep., 1878, p. 149	1782
1783	Yakima City, raised in Washington Territory.	10.30	1.50	8.40	2.88	71.19	5.73	1.7	9.4	3.2	79.4	6.3	U. S. Dept. Agr. Rep., 1883, p. 217	1783
1784	Variety unknown, raised in Wisconsin *a*	13.06	1.60	10.36	1.39	68.42	5.17	1.8	11.9	1.6	78.7	6.0	Wis. Ex. Sta. Rep., 1888, p. 78	1784
1785	King Philip, raised in Wisconsin *a*	13.30	1.18	9.56	1.57	70.04	3.75	1.4	11.0	1.8	81.5	4.3	....do	1785
1786	Variety unknown	12.60	1.49	9.93	1.99	67.50	6.49	1.7	11.4	2.3	77.2	7.4	....do	1786
1787	Early Dutton, 12-rowed, kernels rather small, locality not given.	8.08	1.52	9.62	2.52	72.62	5.64	1.7	10.5	2.7	79.0	6.1	Am. Jour. Sci. and Arts, 1869, p. 352.	1787

* *In loc cit.*, sugar, gum, and albuminoids soluble and insoluble in alcohol are given.

ANALYSES OF AMERICAN FEEDING STUFFS—Continued.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	GRAIN AND OTHER SEEDS—Continued.													
	Sorghum—Continued.	%	%	%	%	%	%	%	%	%	%	%		
1943	Variety unknown	9.28	3.34	11.25	2.06	71.95	2.12	3.6	12.4	2.2	79.5	2.3	N. J. Ex. Sta. Rep., 1881, p. 52	1943
1944	Chicken corn (*Sorghum vulgare*)	44.87	4.30	10.62	8.70	58.95	2.65	5.1	12.4	10.3	69.0	3.2	Miss. Ex. Sta Bul. 8, 1890	1944
	All analyses, excluding No. 1944. Maximum	16.76	4.30	11.25	8.70	73.59	4.60	5.1	12.4	10.3	82.9	5.2		
	All analyses, excluding No. 1944. Minimum	9.28	1.37	7.67	1.48	58.95	2.12	1.6	9.3	1.6	69.0	2.3		
	All analyses, excluding No. 1944. Average	**12.75**	**2.05**	**9.05**	**2.56**	**70.04**	**3.55**	**4.4**	**10.4**	**3.0**	**80.1**	**4.1**		
1945	Broom corn *b*	8.88	4.88	10.69	73.38		2.57	4.9	11.7	80.5		2.9	N. J. Ex. Sta. Rep., 1885, p. 166	1945
1946	Do	14.10	1.98	9.62	7.13	63.64	3.52	2.3	11.2	8.3	74.1	4.1	Mass. State Ex. Sta. Rep., 1887, p. 100	1946
1947	Brown dhoura	7.62	1.68	9.01	1.52	75.99	4.18	1.8	9.8	1.6	82.3	4.5	U. S. Dept. Agr. Rep., 1879, p. 101	1947
1948	Do	12.61	1.63	11.45		74.31		1.8	13.1		85.1		Univ. Tenn. experimental work of Agr. Dept., 1881, p. 163.	1948
1949	Do	12.74	1.42	10.46		75.38		1.6	12.0		86.4		do	1949
1950	Chinese corn	7.87	1.46	9.63	1.79	75.50	3.75	1.6	10.5	2.0	81.8	4.1	U. S. Dept. Agr. Rep., 1879, p. 101	1950
	Oats:													
1951	Variety unknown, raised in Connecticut	12.36	3.03	8.00	12.89	59.02	4.70	3.5	9.1	14.7	67.3	5.4	Middletown (Conn.) Ex. Sta. Rep., 1877–'78, p. 27.	1951
1952	Variety unknown, raised in Connecticut	9.40	2.80	10.06	9.67	62.30	5.77	3.1	11.1	10.6	68.8	6.4	U. S. Census, 1880, vol. III, p. 415	1952
1953	Do	9.27	2.92	9.47	10.11	62.68	5.55	3.2	10.4	11.2	69.1	6.1	do	1953
1954	Do	10.72	2.60	9.19	8.88	63.15	5.46	2.9	10.3	9.9	70.8	6.1	do	1954
1955	Do	10.30	2.97	9.25	9.87	62.31	5.30	3.3	10.3	11.0	69.5	5.9	do	1955
1956	Do	10.86	3.06	9.88	8.94	61.88	5.38	3.4	11.1	10.0	69.4	6.1	do	1956
1957	Do	13.48	3.46	9.38	9.28	59.52	4.88	4.0	10.9	10.8	68.6	5.7	Conn. State Ex. Sta. Rep., 1881, p. 83.	1957
	Average, varieties raised in Connecticut.	**10.94**	**2.95**	**9.32**	**9.95**	**61.55**	**5.29**	**3.4**	**10.5**	**11.2**	**69.0**	**5.9**		
1958	White, raised in Dakota	11.94	3.55	13.00	7.64	58.38	5.49	4.0	14.8	8.7	66.3	6.2	U. S. Census, 1880, vol. III, p. 415	1958
1959	Do	11.55	3.25	12.06	7.23	60.20	5.71	3.7	13.6	8.2	68.0	6.5	do	1959
1960	No. 1. White, raised in Illinois	11.23	2.91	11.54	12.18	57.08	5.06	3.3	13.0	13.7	64.3	5.7	Middletown (Conn.) Ex. Sta. Rep., 1877–'78, p. 27.	1960
1961	Bedford, raised in Massachusetts	9.81	3.36	12.13	9.37	60.92	4.41	3.7	10.4	10.4	67.6	4.9	U. S. Census, 1880, vol. III, p. 415	1961
1962	Variety unknown, raised in Michigan	12.04	3.20	10.69	8.71	61.04	4.32	3.6	12.2	9.9	69.4	4.9	do	1962

	Chinese Hulless, raised in Minnesota	10.57	2.01	14.10	1.47	66.89	4.96	2.2	15.8	1.6	74.9	5.5	do	1963
1964	Variety unknown, raised in New Hampshire	10.77	3.15	11.56	9.66	60.47	4.39	3.5	13.0	10.8	67.8	4.9	do	1964
1965	State, raised in New York	11.03	2.88	10.28	8.76	61.80	5.25	3.2	11.6	9.8	69.5	5.9	do	1965
1966	White State, raised in New York	10.72	3.00	11.31	8.77	61.26	4.94	3.4	12.7	9.8	68.6	5.5	do	1966
1967	Variety unknown	10.56	2.92	13.22	7.37	61.06	4.87	3.3	14.8	8.2	68.3	5.4	do	1967
1968	Schoenen, raised in New York	9.16	2.36	14.40	10.31	59.09	4.68	2.6	15.9	11.4	64.9	5.2	do	1968
1969	Probsteier, raised in New York	9.72	2.91	13.06	8.10	61.44	4.77	3.2	14.5	9.0	68.0	5.3	do	1969
1970	White Probsteier, raised in New York	8.91	3.22	13.69	9.44	60.65	4.09	3.5	15.0	10.4	66.6	4.5	do	1970
1971	Long Island, raised in New York	10.31	2.82	11.34	10.79	60.26	4.48	3.1	12.6	12.0	67.3	5.0	do	1971
	Average, varieties raised in New York.	**10.06**	**2.89**	**12.47**	**9.08**	**60.78**	**4.72**	**3.2**	**13.9**	**10.1**	**67.6**	**5.2**		
1972	Variety unknown, raised in Wisconsin	12.77	3.06	12.34	10.31	58.15	3.37	3.5	14.2	11.8	66.6	3.9	Wis. Ex. Sta. Rep., 1886, p. 95	1972
1973	Do	12.60	2.89	12.54	10.50	56.85	4.62	3.3	14.3	12.0	65.1	5.3	do	1973
1974	Heavy, locality not given *b*	11.47	3.97	10.88	68.08		5.60	4.5	12.2	77.0		6.3	N. J. Ex. Sta. Rep., 1885, p. 172	1974
1975	Do. *b*	10.68	2.69	12.56	68.46		5.61	3.0	14.0	76.7		6.3	do	1975
1976	Do. *b*	10.72	3.56	11.19	69.63		4.90	4.0	12.5	78.0		5.5	do	1976
1977	Light, locality not given *b*	11.17	3.81	10.69	68.36		5.97	4.3	12.0	76.9		6.8	do	1977
1978	Do. *b*	11.48	2.80	12.06	68.78		4.88	3.2	13.7	77.6		5.5	do	1978
1979	Do. *b*	11.06	3.25	9.00	71.72		4.97	3.7	10.1	80.6		5.6	do	1979
1980	White, locality not given *b*	11.52	3.54	12.88	67.48		4.57	4.0	14.5	76.3		5.2	do	1980
1981	Yellow, locality not given *b*	11.27	3.26	11.63	68.99		4.85	3.7	13.0	77.8		5.5	do	1981
1982	Mixed No. 2, locality not given, 34 pounds in a bushel.	11.59	3.15	14.25	7.78	58.12	5.12	3.6	16.1	8.8	65.7	5.8	Conn. State Ex. Sta. Rep., 1888, p. 151.	1982
1983	White No. 2, locality not given, 32 pounds in a bushel.	11.28	3.59	12.43	9.77	57.69	5.24	4.1	13.9	11.1	65.0	5.9	do	1983
1984	Variety unknown *a b*	11.11	2.81	14.44	12.40	54.28	4.96	3.2	16.2	14.0	61.0	5.6	N. Y. State Ex. Sta. Rep., 1888, p. 238.	1984
1985	Do. *a b*	11.86	2.81	13.44	11.50	55.03	5.36	3.2	15.2	13.1	62.4	6.1	do	1985
1986	Do. *a*	12.07	2.89	13.41	12.76	53.53	5.34	3.3	15.2	14.5	60.9	6.1	do	1986
1987	Do. *a b*	11.36	3.22	11.19	12.76	55.88	5.59	3.6	13.7	14.4	62.0	6.3	do	1987
	All complete analyses of oats. Maximum	13.48	3.59	14.44	12.89	66.89	5.77	4.1	16.2	14.7	74.9	6.5		
	All complete analyses of oats. Minimum	8.91	2.01	8.00	1.47	53.53	3.37	2.2	9.1	1.6	60.9	3.9		
	All complete analyses of oats. Average	**10.98**	**2.98**	**11.80**	**9.54**	**59.74**	**4.96**	**3.4**	**13.2**	**10.8**	**67.0**	**5.6**		
	Barley:													
1988	Nepaul, raised in California †	8.68	1.87	12.07	1.40	73.91	2.07	2.0	13.2	1.6	81.0	2.2	U. S. Dept. Agr. Rep., 1878, p. 148	1988
1989	Nepaul (bald), raised in California	11.20	1.82	11.64	1.28	72.37	1.69	2.1	13.1	1.4	81.5	1.9	U. S. Census, 1880, vol. III, p. 421	1989
1990	Do	7.23	1.94	13.17	1.55	72.96	3.15	2.1	14.2	1.7	78.6	3.4	U. S. Dept. Agr. Rep., 1878, p. 148	1990
1991	Four-rowed, raised in Canada	12.05	2.51	10.62	3.31	69.83	1.68	2.9	12.1	3.8	79.3	1.9	U. S. Census, 1880, vol. III, p. 421	1991
1992	Variety unknown, raised in Dakota	12.57	2.43	12.57	3.66	66.97	1.80	2.8	14.4	4.2	76.5	2.1	do	1992
1993	Two-rowed, raised in Massachusetts	11.87	2.99	8.59	4.17	70.90	1.48	3.4	9.7	4.7	80.5	1.7	do	1993
1994	Variety unknown, raised in New Hampshire	10.32	2.68	12.25	4.21	68.98	1.62	3.0	13.6	4.7	76.9	1.8	do	1994
1995	Pueblo (bald), raised in New Mexico	11.12	1.86	15.73	1.40	67.98	1.91	2.1	17.7	1.6	76.5	2.1	do	1995

* 30 bushels per acre.

† *In loc. cit.*, sugar, gum, and albuminoids soluble and insoluble in alcohol are given.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	GRAIN AND OTHER SEEDS—Continued.													
	Wheat, winter varieties—Continued.	%	%	%	%	%	%	%	%	%	%	%		
2178	Missouri Red Fall, St. Louis inspection, clean for grinding, raised in Missouri.	13.52	1.55	11.79	1.72	69.95	1.47	1.8	13.6	2.0	80.9	1.7	Middletown (Conn.) Ex. Sta. Rep., 1877–'78, p. 25.	2178
2179	Yellow, raised in Missouri *	7.69	1.91	11.59	1.53	75.17	2.11	2.1	12.6	1.7	81.3	2.3	U. S. Dept. Agr. Rep., 1878, p. 147	2179
2180	Fultz, raised in Missouri	10.28	1.80	10.50	2.28	72.86	2.28	2.0	11.7	2.5	81.3	2.5	U. S. Dept. Agr. Rep., 1883, p. 205	2180
2181	Shumaker, raised in Missouri	8.64	1.90	12.44	2.49	72.11	2.33	2.2	13.6	2.7	78.9	2.6	do	2181
2182	Zimmerman, raised in Missouri	9.18	2.01	11.38	2.57	72.51	2.35	2.2	12.5	2.8	79.9	2.6	do	2182
2183	Clawson, raised in Missouri	9.18	1.91	11.19	2.28	73.28	2.16	2.1	12.3	2.5	80.7	2.4	do	2183
2184	Russian No. 2, raised in Missouri	8.43	2.09	11.00	2.72	73.53	2.23	2.3	12.0	3.0	80.3	2.4	do	2184
2185	Smooth Mediterranean, raised in Missouri	9.45	1.89	11.75	2.68	72.43	1.80	2.1	13.0	3.0	79.9	2.0	do	2185
2186	Silver Chaff, raised in Missouri	10.99	2.22	11.19	2.29	70.89	2.42	2.5	12.6	2.6	79.6	2.7	do	2186
2187	Octerey, raised in Missouri	11.48	1.90	11.43	1.88	70.95	2.36	2.2	12.9	2.1	80.1	2.7	do	2187
2188	Rice, raised in Missouri	9.36	1.88	14.00	1.77	70.62	2.37	2.1	15.5	1.9	77.9	2.6	do	2188
2189	Tennessee Amber, raised in Missouri	9.41	1.88	10.50	1.85	74.01	2.35	2.1	12.7	2.0	81.6	2.6	do	2189
	Varieties raised in Missouri. Maximum	13.52	2.22	14.00	2.72	75.17	2.42	2.5	15.5	3.0	81.6	2.7		
	Varieties raised in Missouri. Minimum	7.69	1.55	10.50	1.53	69.95	1.47	1.8	11.7	1.7	77.9	1.7		
	Varieties raised in Missouri. Average	**9.80**	**1.92**	**11.57**	**2.17**	**72.36**	**2.18**	**2.1**	**12.8**	**2.3**	**80.4**	**2.4**		
2190	Raised in New Jersey on limestone land.	13.30	2.09	11.39	1.90	69.62	1.70	2.4	13.1	2.2	80.3	2.0	U. S. Census, 1880, vol. III, p. 415	2190
2191	Raised in New Jersey on gray rock gravel soil.	13.67	1.82	12.50	1.93	68.34	1.74	2.1	14.5	2.2	79.2	2.0	do	2191
	Raised in New Jersey, fertilizer, per acre—													
2192	None *b*	13.64	2.03	11.00	1.64	70.07	1.62	2.3	12.7	1.9	81.2	1.9	N. J. Ex. Sta. Rep., 1882, p. 59	2192
2193	22 pounds nitrogen *b*	13.31	2.10	9.19	1.65	72.17	1.58	2.4	10.7	2.0	83.1	1.8	do	2193
2194	52½ pounds phosphoric acid *b*	13.66	2.15	10.38	1.60	70.68	1.53	2.5	12.0	1.8	82.0	1.7	do	2194
2195	75 pounds potash *b*	13.90	2.06	9.50	1.67	71.33	1.54	2.4	11.0	2.0	82.9	1.7	do	2195
2196	22 pounds nitrogen, 52½ pounds phosphoric acid *b*	13.73	2.08	10.75	1.75	70.18	1.51	2.4	12.4	2.1	81.4	1.7	do	2196
2197	None *b*	13.51	2.06	10.38	1.71	70.83	1.51	2.3	12.0	2.0	82.0	1.7	do	2197
2198	22 pounds nitrogen, 75 pounds potash *b*	13.75	2.04	10.06	1.71	71.04	1.40	2.4	11.7	2.1	82.2	1.6	do	2198
2199	52½ pounds phosphoric acid, 75 pounds potash *b*	13.77	2.04	9.75	1.78	71.25	1.41	2.3	11.4	2.1	82.6	1.6	do	2199
2200	52½ pounds phosphoric acid, 75 pounds potash, 22 pounds nitrogen *b*	13.90	2.04	9.19	1.70	71.53	1.64	2.4	10.7	2.0	82.8	2.1	do	2200

2201	400 pounds plaster *b*	13.73	2.02	9.94	1.76	70.99	1.56	2.3	11.6	2.0	82.2	1.9	....do	2201
2202	20 two-horse loads of barnyard manure *b*	13.95	2.05	9.19	2.04	71.28	1.49	2.4	10.7	2.4	82.5	2.0	....do	2202
	Varieties raised in New Jersey. Maximum	13.95	2.15	12.50	2.04	72.17	1.74	2.5	14.5	2.4	83.1	2.1		
	Varieties raised in New Jersey. Minimum	13.30	1.82	9.19	1.64	68.34	1.40	2.1	10.7	1.8	79.2	1.6		
	Varieties raised in New Jersey. Average	13.68	2.04	10.25	1.76	70.72	1.55	2.3	11.8	2.1	82.1	1.7		
2203	White Winter, raised in New York	13.07	1.63	10.63	1.79	71.23	1.65	1.9	12.2	2.1	81.9	1.9	U. S. Census, 1880, vol. III, p. 415	2203
2204	Red Winter, raised in New York	13.30	1.70	13.60	1.73	68.08	1.59	2.0	15.7	2.0	78.5	1.8	....do	2204
2205	Landreth, raised in New York	11.43	2.10	10.85	1.75	71.85	2.02	2.4	12.2	2.0	81.1	2.3	U. S. Dept. Agr. Rep., 1883, p. 200	2205
	Average, varieties raised in New York.	12.60	1.81	11.69	1.76	70.38	1.76	2.1	13.3	2.1	80.4	2.1		
2206	Kivet, raised in North Carolina	11.70	1.55	11.03	2.28	71.22	2.22	1.8	12.5	2.6	80.6	2.5	U. S. Dept. Agr. Rep., 1883, p. 201	2206
2207	Do	11.65	1.80	8.93	1.65	73.86	2.11	2.0	10.1	1.9	83.6	2.4	....do	2207
2208	Do	10.15	1.50	12.25	1.43	72.52	2.15	1.7	13.6	1.6	80.7	2.4	....do	2208
2209	Do	10.90	1.50	9.98	2.12	73.18	2.32	1.7	11.2	2.4	82.1	2.6	....do	2209
2210	Rust-Proof, raised in North Carolina	10.40	1.55	10.33	2.87	72.46	2.39	1.7	11.5	3.2	80.9	2.7	....do	2210
2211	Do	10.60	1.45	10.15	2.84	72.63	2.33	1.6	11.4	3.2	81.2	2.6	....do	2211
2212	Do	9.30	1.80	9.28	1.95	75.42	2.25	2.0	10.2	2.2	83.1	2.5	....do	2212
2213	Baltimore, raised in North Carolina	9.55	1.60	9.98	1.54	75.05	2.28	1.8	11.0	1.7	83.0	2.5	....do	2213
2214	Do	9.85	1.45	11.20	1.10	74.08	2.32	1.6	12.4	1.2	82.3	2.5	....do	2214
2215	Do	9.65	1.65	9.10	1.00	76.35	2.25	1.8	10.1	1.1	84.5	2.5	....do	2215
2216	Do	9.20	1.85	10.15	1.60	75.14	2.06	2.0	11.2	1.8	82.7	2.3	....do	2216
2217	Do	9.70	1.65	11.38	1.63	73.48	2.16	1.8	12.6	1.8	81.4	2.4	....do	2217
2218	Purple Straw, raised in North Carolina	9.40	1.70	10.15	1.70	74.58	2.47	1.9	11.2	1.9	82.3	2.7	....do	2218
2219	Do	10.55	1.35	11.90	1.66	72.12	2.42	1.5	13.3	1.9	80.6	2.7	....do	2219
2220	Davis, raised in North Carolina	8.45	1.75	11.73	2.53	73.26	2.28	1.9	12.8	2.8	80.0	2.5	U. S. Dept. Agr. Rep., 1883, p. 202	2220
2221	Do	8.35	1.60	10.68	0.44	76.50	2.43	1.8	11.7	0.5	83.4	2.6	....do	2221
2222	Do	11.05	1.55	12.43	1.81	70.85	2.31	1.8	14.0	2.1	79.5	2.6	....do	2222
2223	Earnhardt, raised in North Carolina	10.92	1.30	9.98	1.63	74.07	2.10	1.5	11.2	1.8	83.1	2.4	....do	2223
2224	Golden Premium, raised in North Carolina	10.66	1.70	9.63	1.54	74.44	2.03	1.9	10.8	1.7	83.3	2.3	....do	2224
2225	Winter Green, raised in North Carolina	9.40	1.20	9.45	1.44	76.17	2.34	1.3	10.4	1.6	84.1	2.6	....do	2225
2226	Hicks Prolific, raised in North Carolina	8.15	1.85	9.63	1.53	76.64	2.20	2.0	10.5	1.6	83.5	2.4	....do	2226
2227	White Australian, raised in North Carolina	11.15	1.70	10.15	2.50	72.48	2.02	1.9	11.4	2.8	81.6	2.3	....do	2227
	Varieties raised in North Carolina. Maximum	11.70	1.85	12.43	2.87	76.64	2.47	2.0	14.0	3.2	84.5	2.7		
	Varieties raised in North Carolina. Minimum	8.15	1.20	8.93	0.44	70.85	2.02	1.3	10.1	0.5	79.5	2.3		
	Varieties raised in North Carolina. Average	10.03	1.60	10.43	1.76	73.93	2.25	1.8	11.5	2.0	82.1	2.6		
2228	Swamp, raised in Ohio *	7.63	1.84	11.59	1.54	74.99	2.41	2.0	12.6	1.7	81.1	2.6	U. S. Dept. Agr. Rep., 1878, p. 147	2228
2229	Michigan Amber, raised in Ohio	11.30	1.99	11.73	1.78	71.80	1.40	2.2	13.2	2.0	81.0	1.6	U. S. Dept. Agr. Rep., 1883, p. 202	2229

* In *loc. cit.*, sugar, gum, and albuminoids soluble and insoluble in alcohol are given.

ANALYSES OF AMERICAN FEEDING STUFFS—Continued.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	GRAIN AND OTHER SEEDS—Continued.													
	Soja bean (*Soja hispida*)—Continued.	%	%	%	%	%	%	%	%	%	%	%		
2409	Variety unknown *a*	10.00	4.72	35.25	2.45	30.69	16.89	5.2	39.1	2.7	34.2	18.8	S. C. Ex. Sta. Rep., 1888, p. 135	2409
2410	White *c*	17.38	4.31	27.56	4.42	28.24	18.09	5.2	33.4	5.3	34.2	21.9	Mass. State Ex. Sta. Rep., 1889, p 140	2410
2411	Do	5.85	5.24	33.88	4.85	32.84	17.34	5.6	36.0	5.2	34.8	18.4	....do	2411
2412	Black *c*	19.27	5.40	26.25	6.13	26.57	16.38	6.7	32.5	7.6	32.9	20.3	Mass. State Ex. Sta. Rep., 1889, p. 141	2412
	Maximum	19.27	5.40	40.22	6.13	32.84	19.01	6.7	43.8	8.5	49.1	21.9		
	Minimum	5.85	3.07	26.25	2.45	26.17	12.27	3.4	32.5	2.7	29.2	13.4		
	Average	**10.80**	**4.69**	**33.98**	**4.79**	**28.89**	**16.85**	**5.3**	**38.1**	**5.4**	**32.2**	**19.0**		
	Cowpea:													
2413	Black	20.85	2.94	20.08	4.34	50.51	1.28	3.7	25.4	5.5	63.8	1.6	N. C. Ex. Sta. Rep., 1879, p. 112	2413
2414	Yellow	19.20	3.31	23.02	5.03	48.07	1.37	4.1	28.5	6.2	59.5	1.7	....do	2414
2415	Variety unknown	11.76	3.16	19.31	3.49	60.81	1.47	3.5	21.8	4.0	69.0	1.7	N. J. Ex. Sta. Rep., 1881, p. 53	2415
2416	Black-eyed	12.22	3.32	21.59	4.07	57.25	1.55	3.6	24.5	4.7	65.4	1.8	....do	2416
2417	Variety unknown *b*	10.01	3.35	19.75	3.37	61.99	1.53	3.8	21.9	3.8	68.8	1.7	N. J. Ex. Sta. Rep., 1882, p. 71	2417
	Maximum	20.85	3.35	23.02	5.03	61.99	1.55	4.1	28.5	6.2	69.0	1.8		
	Minimum	10.01	2.94	19.31	3.37	50.51	1.28	3.6	21.8	3.8	59.5	1.6		
	Average	**14.81**	**3.22**	**20.75**	**4.06**	**55.72**	**1.44**	**3.8**	**24.3**	**4.7**	**65.5**	**1.7**		
2418	Beans, white field beans	15.00	3.10	20.37	3.20	56.71	1.62	3.6	23.9	3.8	66.8	1.9	Conn. State Ex. Sta. Rep., 1887, p. 105	2418
2419	Sword bean	10.37	2.68	26.60	4.13	53.10	3.12	3.0	29.6	4.6	59.3	3.5	U. S. Dept. Agr. Rep., 1879, p. 10	2419
2420	Navy or pea bean	12.39	3.71	22.17	7.21	53.14	1.38	4.2	25.3	8.2	66.7	1.6	N. Y. State Ex. Sta. Rep., 1885, p. 304	2420
2421	Linseed	6.25	4.63	25.50	10.34	15.37	37.92	4.9	27.3	11.0	16.4	40.4	Mo. Agr. Col. Farm Bul. 27, 1887, p. 6	2421
2422	Linseed, grown in Canada	8.30	3.46	20.47	4.87	30.80	32.10	3.8	22.3	5.3	33.7	34.9	Ontario Agr. Col. Bul. 54, 1888	2422
2423	Peanuts, hulls removed *	10.88	3.80	31.52	3.13	12.22	38.80	.....	.....	.....	.....	.....	Ala. Farm Jour., 1880, p. 333	2423
	MILL PRODUCTS.													
	MILL PRODUCTS FROM CORN (MAIZE).													
	Corn (maize) meal:													
2424	Not described	12.91	1.17	8.69	1.79	71.93	3.51	1.3	10.0	2.1	82.6	4.0	Conn. State Ex. Sta. Rep., 1877, p. 56	2424
2425	From home-ground yellow flint	20.67	1.17	7.81	0.93	66.35	3.07	1.5	9.8	1.2	83.6	3.9	....do	2425

2426	From Western corn	21.67	1.16	7.38	1.41	65.88	2.50	1.5	9.4	1.8	84.1	3.2	..... do 2426
2427	From old Western corn	14.56	1.22	9.12	2.16	68.89	4.05	1.	10.7	2.5	80.7	4.7	Conn. State Ex. Sta. Rep., 1880, p. 61 . 2427
2428	From New York corn	15.32	1.47	8.63	1.83	68.77	3.98	1.7	10.2	2.2	81.2	4.7	.....do 2428
2429	Not described	13.87	1.33	7.88	1.60	71.92	3.40	1.5	9.2	1.9	83.4	4.0	N. J. Ex. Sta. Rep., 1880, p. 46 2429
2430	Do.	12.79	1.40	7.81	1.57	72.70	3.73	1.6	9.0	1.8	83.3	4.3	N. J. Ex. Sta. Rep., 1880, p. 47 2430
2431	Do.	11.99	1.93	8.50	2.38	71.13	4.07	2.	9.8	2.7	80.8	4.6	N. J. Ex. Sta. Rep., 1881, p. 53 2431
2432	Do.	9.86	1.92	10.85	2.38	70.36	4.63	2.	12.1	2.6	78.1	5.1	U. S. Dept. Agr. Rep., 1881-'82, p. 553 . 2432
2433	Do.	12.75	1.48	8.35	1.60	71.76	4.06	1.7	9.4	1.8	82.5	4.6	N. J. Ex. Sta. Rep., 1882, p. 71 2433
2434	Do. *b*	11.99	3.46	8.59	2.03	69.82	4.11	4.0	9.	2.3	79.2	4.7	.....do 2434
2435	Do.	14.60	1.60	9.20	1.90	69.10	3.60	1.9	10.8	2.2	80.9	4.2	Maine Agr., 1882, p. 302 2435
2436	Do.	13.24	1.40	10.09	1.71	69.05	4.51	1.6	11.6	2.0	79.6	5.2	Cornell Univ. Ex. Sta. Rep., 1883, p. 41 2436
2437	Do.	18.81	1.30	8.81	1.35	67.37	2.36	1.6	10.9	1.6	83.0	2.9	Conn. State Ex. Sta. Rep., 1883, p. 84 . 2437
2438	Do.	17.04	1.31	13.94	2.98	60.73	4.00	1.6	16.8	3.6	73.2	4.8	Mass. State Ex. Sta. Rep., 1883, p. 65 . 2438
2439	Do.	13 55	1.23	9.00	2.28	70.27	3.67	1.4	10.4	2.6	81.4	4.2	Mass. State Ex. Sta. Rep., 1883, p. 66 . 2439
2440	Do.	19.98	1.18	8.65	0.50	65.35	4.34	1.5	10.8	0.6	81.7	5.4	N. Y. Ex. Sta. Rep., 1883, p. 151 2440
2441	From whole kernels	12.84	1.15	7.52	0.98	73.88	3.63	1.3	8.6	1.1	84.8	4.2	.....do 2441
2442	From flinty portion of kernel, same corn as the preceding.	13.05	1.09	7.66	0.96	73.43	3.81	1.2	8.8	1.1	84.5	4.4	.....do 2442
2443	From that portion of the kernel containing and surrounding the germ, same corn as the two preceding.	12.53	1.26	7.11	1.68	73.96	3.46	1.4	8.1	1.9	84.6	4.0	.....do 2443
2444	Not described	11.95	1.40	11.56	2.28	68.91	3.90	1.6	13.1	2.6	78.3	4.4	Mass. State Ex. Sta. Rep., 1884, p. 111 2444
2445	Do.	12.40	1.45	9.44	2.37	70.71	3.63	1.7	10.8	2.7	80.7	4.1	.....do 2445
2446	Do.	13.85	23	8.95	2.28	70.03	3.66	1.4	10.4	2.6	81.4	4.2	Mass. State Ex. Sta. Rep., 1884, p. 41 . 2446
2447	Do. *b*	15.75	1.35	8.76	1.70	68.54	3.90	1.7	10.4	2.0	81.3	4.6	N. J. Ex. Sta. Rep., 1884, p. 107 2447
2448	Do. *b*	16.60	1.55	8.44	1.91	67.58	3.92	1.9	10.1	2.3	81.0	4.7	.....do 2448
2449	Do.	16.17	1.45	8.60	1.81	68.06	3.91	1.7	10.2	2.1	81.3	4.7	N. J. Ex. Sta. Rep., 1884, p. 116 2449
2450	Do.	20.30	1.17	9.06	1.41	65.83	2.23	1.5	11.4	1.8	82.5	2.8	N. Y. Ex. Sta. Rep., 1884, p. 332 2450
2451	Do.	24.54	1.18	8.20	1.52	60.60	3.96	1.5	10.9	2.0	80.4	5.2	.....do 2451
2452	Do.	21.00	1.29	9.02	1.74	64.62	2.33	1.6	11.4	2.2	81.8	3.0	.....do 2452
2453	Pure corn meal *b*	11.75	1.40	9.00		73.32	4.53	1.6	10.2		83.1	5.1	N. J. Ex. Sta. Rep., 1885, p. 104 2453
2454	Not described	13.51	1.40	9.06		72.41	3.62	1.6	10.5		83.7	4.2	.....do 2454
2455	Do. *b*	13.01	1.42	8.75		72.93	3.89	1.6	10.1		83.8	4.5	.....do 2455
2456	Do. *b*	13.57	1.36	9.38		71.14	4.55	1.6	10.8		82.3	5.3	.....do 2456
2457	White dent corn meal *b*	12.97	1.45	9.44		71.79	4.35	1.6	10.8		82.5	5.1	.....do 2457
2458	From 8-rowed yellow corn *b*	12.52	1.30	9.37		73.06	3.75	1.5	10.7		83.5	4.3	.....do 2458
2459	Yellow flint corn meal *b*	12.36	1.30	9.13		72.92	4.29	1.5	10.5		83.1	4.9	.....do 2459
2460	Do. *b*	9.58	1.70	10.44		73.46	4.82	1.9	11.5		81.3	5.3	.....do 2460
2461	Do. *b*	13.05	1.47	9.56		71.17	4.75	1.7	11.0		81.8	5.5	.....do 2461
2462	White flint corn meal *b*	10.29	1.21	8.88		76.53	3.09	1.3	9.9		85.4	3.4	.....do 2462
2463	Yellow dent corn meal *b*	13.11	1.12	8.75		72.37	4.65	1.3	10.1		83.2	5.4	.....do 2463
2464	Do. *b*	13.93	1.36	8.56		72.97	3.18	1.6	10.0		84.7	3.7	.....do 2464
2465	Western corn meal, coarse *b*	12.79	1.49	8.31		73.46	3.95	1.7	10.		83.6	4.6	.....do 2465
2466	Do. *b*	11.79	1.53	9 56		73.01	4.11	1.7	10.		82.9	4.6	.....do 2466
2467	Do. *b*	12.04	1.58	8.94		73.44	4.00	1.8	10.		83.5	4.5	.....do 2467
2468	Corn meal, old and new mixed *b*	16.95	1.41	8.50		69.42	3.72	1.7	10.		83.6	4.5	.....do 2468
2469	Do. *b*	14.93	1.46	9.44		69.95	4.22	1.7	11.		82.3	4.9	.....do 2469
2470	New feed, Indian *b*	20.90	1.37	8.38		67.39	1.96	1.7	10.6		85.2	2.5	.....do 2470

* Adds 65.35

ANALYSES OF AMERICAN FEEDING STUFFS—Continued.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	MILL PRODUCTS—Continued.													
	PRODUCTS OF ROLLER MILLING—continued.													
	C. A. Pillsbury & Co., Minneapolis—Continued													
	Middlings, reduction on smooth rolls—cont'd.	%	%	%	%	%	%	%	%	%	%	%		
2647	Chop from third	12.73	0.79	12.60	0.58	71.29	2.01	0.9	14.4	0.7	81.7	2.3	U. S. Dept. Agr., Div. of Chem. Bul. 4, 1884, p. 38.	2647
2648	Fourth	11.43	0.56	12.60	0.43	73.12	1.86	0.7	14.1	0.5	82.6	2.1	do	2648
2649	Chop from fourth	11.72	0.50	13.13	0.33	72.56	1.76	0.6	14.8	0.4	82.2	2.0	do	2649
2650	Fifth	12.21	0.65	12.78	0.43	71.85	2.08	0.7	14.5	0.5	81.9	2.4	U. S. Dept. Agr., Div. of Chem. Bul. 4, 1884, p. 39.	2650
2651	Chop from fifth	11.47	0.56	12.78	0.50	72.66	2.03	0.6	14.5	0.6	82.0	2.3	do	2651
	Flour from reduction of middlings—													
2652	First	12.03	0.39	12.05	0.25	73.70	1.58	0.4	13.7	0.3	83.8	1.8	do	2652
2653	Second*	12.42	0.44	12.60	0.33	72.55	1.66	0.5	14.4	0.4	82.7	2.0	do	2653
2654	Third	11.54	0.38	11.20	0.28	75.24	1.38	0.4	12.6	0.3	85.1	1.6	do	2654
2655	Fourth	11.58	0.40	13.30	0.38	72.92	1.42	0.4	15.0	0.4	82.6	1.6	do	2655
2656	Fifth												do	2656
	Tailings from middlings purifiers—													
2657	No. 1	12.33	3.30	16.10	3.25	60.06	4.96	3.8	18.3	3.8	68.4	5.7	do	2657
2658	Nos. 2, 3, and 4	11.59	3.09	14.53			3.92	3.5	16.4			4.4	do	2658
2659	No. 6	12.00	0.90	14.53	1.10	69.10	2.37	1.0	16.4	1.3	78.6	2.7	do	2659
	Tailings from reductions—													
2660	First	11.78	3.26	16.98	2.63	60.32	5.03	3.7	19.3	2.9	68.4	5.7	do	2660
2661	Second	10.35	3.38	19.95	2.08	59.87	4.37	3.8	22.3	2.3	66.7	4.9	do	2661
2662	Third	11.72	2.35	16.63	1.66	63.27	4.37	2.7	18.8	1.9	71.6	5.0	do	2662
2663	Fourth	12.09	0.88	14.00	0.40	68.47	4.16	1.2	16.0	0.4	77.7	4.7	do	2663
2664	Fifth	12.12	2.29	16.63	1.18	63.93	3.85	2.6	18.8	1.4	72.8	4.4	do	2664
2665	Repurified middlings	11.72	2.11	14.88	1.63	65.99	3.67	2.4	16.9	1.8	74.6	4.3	do	2665
	Finished flour—													
2666	Bakers	12.18	0.62	14.88	0.33	69.99	2.00	0.7	17.0	0.4	79.5	2.4	do	2666
2667	Patent	11.48	0.39	12.95	0.18	73.55	1.45	0.4	14.7	0.2	83.0	1.7	do	2667
2668	Low-grade	12.01	1.99	17.95	0.93	63.26	3.86	2.3	20.4	1.1	71.8	4.4	do	2668
2669	Break flour	12.48	0.58	15.40	0.23	69.44	1.87	0.7	17.5	0.3	79.3	2.2	do	2669
2670	Stone flour	12.04	0.49	12.78	0.23	72.85	1.61	0.5	14.6	0.3	82.8	1.8	do	2670
	Flour from tailings—													
2671	First	12.55	0.62	13.30	0.35	70.25	2.93	0.7	15.1	0.4	80.4	3.4	do	2671
2672	Second*	11.20	0.76	13.65	0.48	72.28	2.63	0.8	15.1	0.5	81.4	2.9	do	2672
2673	Third	12.50	0.35	13.13	0.53	70.20	2.79	0.9	15.0	0.6	80.3	3.2	do	2673

2674	Cockle chop	12.45	2.79	12.78	3.48	64.01	4.34	3.2	14.6	4.1	73.1	5.0	do	2674
2675	Cockle bran	7.71	3.46	10.50	9.03	65.46	3.84	3.8	11.8	9.8	71.0	4.1	do	2675
2676	First germ	8.69	3.42	24.13	1.23	53.28	9.35	3.7	26.4	1.3	58.4	10.2	do	2676
2677	Second germ	8.75	5.45	33.25	1.75	35.19	15.61	6.0	36.5	2.0	38.5	17.0	do	2677
2678	Third germ	7.68	4.94	32.88	1.50	39.25	13.75	5.4	35.6	1.6	42.6	14.8	do	2678
2679	Bran duster flour	11.78	1.17	13.65	0.50	70.20	2.70	1.4	15.4	0.6	79.5	3.1	do	2679
	Stone stock—													
2680	No. 2*	12.15	0.40	13.65	0.25	72.91	1.64	0.5	15.4	0.3	82.0	1.8	do	2680
2681	No. 3	12.01	0.55	13.13	0.43	71.76	2.12	0.6	14.9	0.5	81.6	2.4	do	2681
	Tailings—													
2682	From sixth break	11.64	2.29	15.75	1.95	64.31	4.06	2.6	17.8	2.3	72.7	4.6	do	2682
2683	From first centrifugal reel	11.42	2.15	15.23	1.20	66.56	3.44	2.5	17.0	1.4	75.3	3.8	do	2683
2684	From second centrifugal reel	11.07	2.85	17.33	2.20	61.82	4.73	3.3	19.5	2.5	69.4	5.3	do	2684
2685	Tail end of tailings	11.36	3.87	15.75	.....	.....	5.23	4.4	17.8	.....	.....	5.9	do	2685
2686	Dust from No. 1 middlings	11.03	1.83	14.35	5.20	64.86	2.73	2.0	16.1	5.9	73.0	3.0	do	2686
2687	Dust from dust catcher	11.53	1.17	14.00	1.65	69.01	2.64	1.4	15.8	1.9	78.0	2.9	do	2687
	Herr & Cissel, Georgetown, D. C.:													
2688	Mixed wheat, clean	9.62	1.93	12.78	1.55	71.83	2.29	2.1	14.0	1.7	79.7	2.5	do	2688
2689	First break	8.13	2.03	13.48	1.60	72.30	2.46	2.2	14.8	1.7	78.6	2.7	do	2689
2690	Second break	9.47	2.00	13.13	1.58	71.81	2.01	2.2	14.5	1.8	79.3	2.2	do	2690
2691	Third break	8.79	2.03	13.13	1.70	71.98	2.37	2.2	14.5	1.9	78.8	2.6	do	2691
2692	Fourth break	8.91	2.39	13.65	1.75	70.97	2.33	2.6	14.9	2.0	78.0	2.5	U. S. Dept. Agr., Div. of Chem. Bul. 4, 1884, p. 40.	2692
2693	Fifth break	7.18	3.46	15.40	.....	.....	.....	3.7	16.6	.....	.....	.....	do	2693
2694	Sixth break	9.38	4.76	16.10	.....	.....	.....	5.3	17.7	.....	.....	.....	do	2694
2695	First middling	11.96	0.49	10.68	0.35	75.30	1.22	0.5	12.1	0.4	85.6	1.4	do	2695
2696	Second middling	11.89	0.51	10.50	0.33	75.56	1.21	0.5	11.9	0.4	85.8	1.4	do	2696
2697	Third middling	10.88	0.50	11.73	0.25	75.45	1.19	0.6	13.0	0.3	84.8	1.3	do	2697
2698	First middling, through smooth rolls	9.87	1.84	13.13	1.18	71.98	2.00	2.0	14.6	1.3	79.9	2.2	do	2698
2699	Patent flour	12.98	0.32	9.98	0.20	75.60	0.92	0.4	11.6	0.2	86.7	1.1	do	2699
2700	Bakers' flour	13.29	0.47	11.03	1.50	72.45	1.26	0.5	12.8	1.7	83.6	1.4	do	2700
2701	Low-grade flour	12.59	1.05	14.18	0.75	69.10	2.33	1.2	16.2	0.8	79.2	2.6	do	2701
2702	Germ middlings	11.10	2.41	14.53	1.63	66.59	3.74	2.7	16.3	1.8	75.0	4.2	do	2702
2703	Feed middlings or tailings	8.53	3.75	16.45	4.10	62.21	4.96	4.0	18.0	4.5	68.0	5.5	do	2703
2704	Bran middlings	8.24	6.89	16.45	6.13	56.77	5.52	7.5	18.0	6.6	61.9	6.0	do	2704
	Warder & Barnett, Springfield, Ohio:													
2705	Wheat	9.05	2.06	12.43	2.33	71.67	2.46	2.2	13.7	2.5	78.9	2.7	do	2705
2706	Patent flour	12.32	0.34	10.68	0.33	75.28	1.05	0.4	12.1	0.4	85.9	1.2	do	2706
2707	Bakers' flour	11.98	0.60	13.13	1.00	71.52	1.77	0.7	14.8	1.2	81.3	2.0	do	2707
2708	Low-grade flour	12.36	0.69	9.98	0.93	75.04	1.00	0.8	11.4	1.1	85.5	1.2	do	2708
2709	Middlings	8.49	4.28	17.50	3.15	60.64	5.94	4.7	19.1	3.7	66.0	6.5	do	2709
2710	Bran	7.74	6.99	15.40	.....	.....	4.99	7.6	16.7	.....	.....	5.4	do	2710
2711	Patent flour, second sample	13.59	0.36	10.68	0.35	73.94	1.08	0.4	12.4	0.4	85.6	1.2	do	2711
	MILL PRODUCTS FROM RICE.													
2712	Rice flour	3.66	10.71	4.68	28.31	50.90	1.74	11.1	4.8	29.4	52.9	1.8	N. C. Ex. Sta. Rep., 1882, p. 91	2712
2713	Rice meal	15.11	6.03	9.25	8.12	59.88	1.61	7.1	10.9	9.6	70.5	1.9	Middletown (Conn.) Ex. Sta. Rep., 1877–'78, p. 27.	2713

* Adds 101 (fresh or air-dry material).

ANALYSES OF AMERICAN FEEDING STUFFS—Continued.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	MILL PRODUCTS—Continued.													
	MILL PRODUCTS FROM MISCELLANEOUS SEEDS.													
	Buckwheat flour:	%	%	%	%	%	%	%	%	%	%	%		
2714	From Massachusetts	14.94	0.65	4.18	0.21	79.37	0.65	0.7	4.9	0.3	93.3	0.8	U. S. Census, 1880, vol. III, p. 423	2714
2715	From Connecticut	12.84	1.26	8.00	0.35	75.81	1.74	1.5	9.2	0.4	86.9	2.0	....do	2715
2716	Locality unknown	12.78	1.26	7.25	0.27	76.85	1.59	1.5	8.3	0.3	88.1	1.8	....do	2716
2717	Do. *b*	16.19	0.52	4.19	78.42		0.64	0.6	5.0	93.7		0.7	N. J. Ex. Sta. Rep., 1885, p. 168	2717
2718	Do. *b*	15.82	0.51	3.88	79.16		0.63	0.6	4.6	94.1		0.7	....do	2718
2719	Do	17.63	0.83	8.13	0.52	71.10	1.79	1.0	9.8	0.6	86.6	2.0	Conn. State Ex. Sta. Rep., 1880, p. 111	2719
	Average, all complete analyses	**14.55**	**1.00**	**6.89**	**0.34**	**75.78**	**1.44**	**1.2**	**8.0**	**0.4**	**88.8**	**1.6**		
2720	Buckwheat farina	11.23	0.41	3.31	0.13	84.64	0.28	0.5	3.7	0.2	95.3	0.3	U. S. Census, 1880, vol. III, p. 423	2720
2721	Buckwheat groats	10.61	0.57	4.82	0.28	83.13	0.59	0.6	5.4	0.3	93.0	0.7	....do	2721
2722	Ground linseed *b*	8.82	3.62	25.77	28.24		33.57	4.0	28.2	31.1		36.7	N. J. Ex. Sta. Rep., 1885, p. 172	2722
2723	Do. *b*	7.77	4.44	22.31	33.79		31.69	4.8	24.2	36.7		34.3	....do	2723
2724	Do	8.33	3.36	22.97	9.60	25.48	30.26	3.7	25.1	10.5	27.7	33.0	N. Y. State Ex. Sta. Rep., 1885, p. 306	2724
2725	Do	7.89	6.08	20.31	5.01	30.21	30.50	6.6	22.0	5.4	33.0	33.0	Ontario Agr. Col. Bul. 34, 1888	2725
	Average, Nos. 2724 and 2725	**8.11**	**4.72**	**21.64**	**7.30**	**27.85**	**30.38**	**5.1**	**23.4**	**8.1**	**30.4**	**33.0**		
2726	Pea meal *b*	11.35	2.50	26.56	57.62		1.97	2.8	29.9	65.0		2.3	N. J. Ex. Sta. Rep., 1885, p. 166	2726
2727	Do	12.08	2.61	21.37	11.06	52.02	0.86	3.0	24.3	12.6	59.1	1.0	N. Y. State Ex. Sta. Rep., 1885, p. 305	2727
2728	Do. *c*	8.85	2.67	19.10	17.70	50.17	1.51	2.9	21.0	19.4	55.0	1.7	Mass. State Ex. Sta. Rep., 1887, p. 101	2728
2729	Do	7.07	3.13	24.35	3.81	60.96	0.09	3.4	26.2	4.1	66.2	0.1	Wis. Ex. Sta. Rep., 1888, p. 141	2729
	Average, Nos. 2727 and 2728	**10.46**	**2.64**	**20.23**	**14.38**	**51.10**	**1.19**	**2.9**	**22.5**	**16.0**	**57.2**	**1.4**		

	MIXED FEED.												
2730	**Corn and oats** *b*	13.65	2.12	9.13	71.57		3.53	2.4	10.6	82.9	4.1	N. J. Ex. Sta. Rep., 1885, p. 170	2730
2731	**Equal parts of corn and oats** *b*	11.25	1.88	10.38	72.16		4.33	2.1	11.6	81.2	5.1	do	2731
2732	**Do.** *b*	12.34	2.73	9.44	71.51		3.98	3.1	10.7	81.7	4.5	do	2732
2733	**Do.** *b*	11.35	2.23	9.94	71.48		5.00	2.5	11.2	80.7	5.6	do	2733
2734	**Do.** *b*	12.41	2.02	8.38	73.05		4.14	2.3	9.6	83.4	4.7	do	2734
2735	**Do.** *b*	10.72	1.90	9.38	73.65		4.35	2.1	10.5	82.5	4.9	do	2735
2736	**Do.** *b*	13.07	2.31	9.94	70.37		4.31	2.6	11.5	81.0	4.9	do	2736
2737	**Unequal parts of corn and oats:** only enough corn to cause the mixture to grind *b*.	11.11	3.61	10.44	70.39		4.45	4.0	11.9	79.1	5.1	do	2737
2738	**Two parts of corn, 1 part of oats** *b*	13.42	1.67	8.75	72.69		3.47	2.0	10.1	83.9	4.0	do	2738
	Equal parts of corn and oats, Nos. 2731–2736. Maximum	13.07	2.73	10.38	73.65		5.00	3.1	11.6	83.4	5.6		
	Minimum	10.72	1.88	8.38	70.37		3.98	2.1	9.6	80.7	4.5		
	Average	**11.86**	**2.18**	**9.57**	**72.04**		**4.35**	**2.4**	**10.9**	**81.7**	**5.0**		
2739	**Corn, corn cob, and oats**	11.04	2.00	8.43	5.07	68.67	4.79	2.2	9.5	5.7 | 77.2	5.4	Vt. Ex. Sta. Rep., 1887, p. 132	2739
2740	**Corn cob and oats** *b*	14.04	1.53	7.94	72.80		3.69	2.3	9.3	84.1	4.3	N. J. Ex. Sta. Rep., 1885, p. 170	2740
2741	**Corn, rye, and oats** *b*	10.41	1.95	10.56	73.73		3.35	2.2	11.8	82.2	3.8	do	2741
2742	**Do.** *b*	11.78	2.01	8.82	74.34		3.05	2.3	10.0	84.2	3.5	do	2742
2743	**Corn and bran feed, 800 pounds corn, 500 pounds bran** *b*.	11.48	2.71	10.56	71.22		4.03	3.0	11.9	80.6	4.5	do	2743
2744	**Corn, oats, and wheat bran, "provender," 450 pounds corn, 125 pounds oats, and 100 pounds bran.**	9.40	3.10	13.00	10.44	58.84	5.22	3.4	4.3	11.5	65.0	5.8	Mass. State Ex. Sta. Rep., 1888, p. 91.	2744
2745	**Ground oat feed, contained admixtures richer in albuminoids and fat than oats.**	8.92	3.21	7.00	8.00	55.27	7.60	3.5	18.7	8.8	60.7	8.3	do	2745
	BY-PRODUCTS AND WASTE MATERIALS.												
	BY-PRODUCTS FROM CORN (MAIZE).												
	Corn (maize) cob, flint varieties:												
2746	Norfolk White, raised in North Carolina	7.18	1.23	1.81	29.80	59.57	0.31	1.4	1.9	32.1	64.3	0.3	Conn. State Ex. Sta. Rep., 1878, p. 72.	2746
2747	Vermont White Cap, raised in Connecticut	8.40	0.96	2.63	30.47	57.21	0.33	1.1	2.9	33.2	62.4	0.4	do	2747
2748	Rowley, raised in Connecticut	8.05	0.98	1.81	32.39	56.54	0.23	1.1	2.0	35.2	61.5	0.2	do	2748
2749	Wheeler Prolific, raised in Massachusetts	10.00	1.27	3.73	29.87	54.52	0.61	1.4	4.1	33.2	60.6	0.7	Mass. Agr., 1879–'80, p. 250	2749
2750	Rhode Island White Cap	7.28	1.39	2.00	33.24	55.49	0.60	1.5	2.2	35.8	59.8	0.7	Conn. State Ex. Sta. Rep., 1887, p. 119.	2750
	Corn (maize) cob, dent varieties:												
2751	Ohio Dent, raised in Connecticut	8.21	0.97	2.56	30.99	56.99	0.28	1.1	2.8	33.7	62.1	0.3	Conn. State Ex. Sta. Rep., 1878, p. 72.	2751
2752	Southern White, raised in Massachusetts	10.00	0.68	3.14	30.05	55.79	0.34	0.8	3.4	33.4	62.0	0.4	Mass. Agr., 1879–'80, p. 250	2752
2753	Yellow Western, raised in Illinois	10.00	0.85	3.26	28.23	57.25	0.41	1.0	3.7	31.3	63.5	0.5	do	2753
2754	Kansas Dent	9.25	1.16	1.91	31.22	55.86	0.60	1.4	2.1	34.4	61.4	0.7	Kans. Agr. Col. Rep., 1884, p. 5	2754
2755	Pride of the North *c*	24.76	1.32	2.26	25.41	45.86	0.39	1.7	3.0	33.8	61.0	0.5	Mass. State Ex. Sta. Rep., 1888, p. 84.	2755
	Corn (maize) cob, sweet varieties:												
2756	Immature, cut August 9	10.10	6.70	8.56	21.40	51.14	2.10	7.5	9.5	23.8	56.9	2.3	Conn. State Ex. Sta. Rep., 1878, p. 72.	2756
2757	Immature, cut August 25	9.02	2.60	3.00	29.63	54.91	0.84	2.9	3.3	32.6	60.3	0.9	do	2757
2758	Cut September 25	8.82	1.47	2.69	30.57	55.53	0.92	1.6	3.0	33.5	60.9	1.0	do	2758
2759	**Corn (maize) cob, soft variety, Tuscarora**	8.37	1.57	2.56	30.01	57.15	0.34	1.7	2.8	32.7	62.4	0.4	do	2759

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	BY-PRODUCTS AND WASTE MATERIALS—Continued.													
	BY-PRODUCTS FROM CORN (MAIZE)—continued.													
	Corn (maize) germ:	%	%	%	%	%	%	%	%	%	%	%		
2818	Corn feed, ground germ	9.35	1.92	9.85	5.76	61.91	11.21	2.1	10.8	6.3	68.6	12.2	N. Y. State Ex. Sta. Rep., 1886, p. 366.	2818
2819	Corn hearts	9.72	7.37	9.85	4.62	62.61	5.83	8.2	11.0	5.1	69.3	6.4	Wis. Ex. Sta. Rep., 1888, p. 141	2819
2820	Corn "germs"	13.02	2.70	9.73	1.91	67.42	5.22	3.1	11.2	2.2	77.5	6.0	Mass. State Ex. Sta. Rep., 1889, p. 142.	2820
	Average	**10.69**	**3.99**	**9.81**	**4.10**	**63.99**	**7.42**	**4.5**	**11.0**	**4.6**	**71.7**	**8.2**		
	Corn (maize) bran:													
2821	Corn bran *b*	7.66	1.42	6.94	80.01		3.97	1.5	7.6	86.6		4.3	N. J. Ex. Sta. Rep., 1885, p. 176	2821
2822	Corn feed, ground hulls	6.12	1.50	7.04	13.26	64.55	7.53	1.6	7.5	14.1	68.8	8.0	N. Y. State Ex. Sta. Rep., 1886, p. 366.	2822
2823	Corn bran	9.75	16.45	7.12	11.30	50.38	5.00	18.2	7.9	12.5	55.9	5.5	Wis. Ex. Sta. Rep., 1888, p. 141	2823
2824	Corn "husks" or "chaff"	13.26	2.43	4.86	16.38	61.68	1.39	2.8	5.6	18.9	71.1	1.6	Mass. State Ex. Sta. Rep., 1889, p. 142.	2824
	BY-PRODUCTS FROM MAIZE IN GLUCOSE MANUFACTURE.													
2825	Gluten meal *c*	8.43	0.59	35.00	3.25	44.72	8.01	0.6	38.2	3.6	48.8	8.8	Mass. State Ex. Sta. Rep., 1883, p. 70	2825
2826	Do	10.23	0.58	30.12	1.08	53.45	4.54	0.6	33.6	1.2	59.5	5.1	Mass. State Ex. Sta. Rep., 1883, p. 71	2826
2827	Do	7.31	0.74	28.03	0.73	54.46	8.73	0.8	30.2	0.8	58.8	9.4	N. Y. State Ex. Sta. Rep., 1883, p. 151	2827
2828	Do	11.68	0.67	24.95	0.68	58.53	3.49	0.8	28.2	0.8	66.3	3.9	Mass. State Ex. Sta. Rep., 1884, p. 56	2828
2829	Do	9.92	1.04	29.50	1.04	54.32	4.18	1.1	32.7	1.2	60.3	4.7	N. J. Ex. Sta. Rep., 1884, p. 107	2829
2830	Do	8.47	0.70	32.32	1.58	48.39	8.54	0.8	35.3	1.7	52.8	9.4	Mass. State Ex. Sta. Rep., 1885, p. 22	2830
2831	Do	8.25	0.86	30.16	2.44	53.13	5.16	0.9	32.9	2.7	57.9	5.6	N. Y. State Ex. Sta. Rep., 1885, p. 306.	2831
2832	Do	16.50	0.61	15.03	7.81	55.26	4.79	0.7	18.0	9.3	66.3	5.7	do	2832
2833	Do	12.29	0.66	15.84	8.25	57.96	5.00	0.7	18.1	9.4	66.1	5.7	do	2833
2834	Do	9.00	0.74	17.40	8.59	56.93	7.34	0.8	19.1	9.4	62.6	8.1	do	2834
2835	Do	8.86	1.01	29.12	0.86	53.91	6.24	1.1	31.9	0.9	59.3	6.8	Conn. State Ex. Sta. Rep., 1885, p. 42	2835
2836	Do	8.95	0.69	28.05	1.44	54.03	6.84	0.7	30.8	1.6	59.4	7.5	Mass. State Ex. Sta. Rep., 1886, p. 38	2836
2837	Do	12.29	0.66	29.47	0.97	50.62	5.99	0.8	33.7	1.1	57.6	6.8	Conn. State Ex. Sta. Rep., 1886, p. 113.	2837
2838	Do *c*	8.83	0.67	28.65	0.72	53.41	7.72	0.7	31.4	0.8	58.6	8.5	Mass. State Ex. Sta. Rep., 1887, p. 34	2838
2839	Do *c*	8.45	0.69	32.33	1.58	48.40	8.55	0.7	35.3	1.7	53.0	9.3	Mass. State Ex. Sta. Rep., 1887, p. 84	2839
2840	Do	10.04	0.70	31.18	4.00	45.68	8.40	0.8	34.7	4.4	50.8	9.3	Mass. State Ex. Sta. Rep., 1887, p. 85	2840
2841	Do	8.23	1.27	27.38	1.46	55.98	5.68	1.4	29.8	1.6	61.0	6.2	Conn. State Ex. Sta. Rep., 1887, p. 105.	2841
2842	Do	10.19	0.63	29.62	1.65	50.15	7.76	0.7	33.0	1.8	32.9	8.6	Vt. Ex. Sta. Rep., 1887, p. 135	2842
2843	Do	9.45	0.56	27.81	1.57	52.92	7.69	0.7	30.6	1.8	58.4	8.5	do	2843
2844	Do	7.97	1.67	35.54	1.04	46.79	6.99	1.8	38.6	2.1	50.9	7.6	Vt. Ex. Sta. Rep., 1887, p. 137	2844
2845	Do	9.77	0.84	31.97	4.15	47.29	5.98	0.9	35.4	4.6	52.5	6.6	Mass. State Ex. Sta. Rep., 1888, p. 35.	2845

2846	Do	10.59	0.47	33.12	0.80	50.11	4.91	0.5	37.0	0.9	56.1	5.5	Mass. State Ex. Sta. Rep., 1888, p. 50.
2847	Do	10.09	0.46	35.32	0.77	48.99	4.37	0.5	39.3	0.9	54.4	4.9	Mass. State Ex. Sta. Rep., 1888, p. 83.
2848	Do	9.50	0.98	32.75	4.29	48.93	3.55	1.1	36.2	4.7	54.1	3.9	Mass. State Ex. Sta. Rep., 1888, p. 89.
2849	Do	11.10	0.49	30.93	0.81	51.22	5.45	0.5	34.8	0.9	57.7	6.1	Mass. State Ex. Sta. Rep., 1888, p. 90.
2850	Do	6.40	1.02	28.25	5.03	57.23	9.07	1.1	22.7	5.4	61.1	9.7	Vt. Ex. Sta. Rep., 1888, p. 76
2851	Do	9.15	0.83	32.31	0.73	47.37	9.61	0.9	35.6	0.8	52.1	10.6	....do
2852	Do	10.22	0.45	27.02	0.54	56.83	4.94	0.5	30.1	0.6	63.3	5.5	Mass. State Ex. Sta. Rep., 1889. p. 32.
2853	Do	9.49	0.09	27.06	0.27	57.01	6.06	0.1	29.9	0.3	63.0	6.7	Mass. State Ex. Sta. Rep., 1889, p. 134.
2854	Do	10.50	0.27	26.13	0.36	56.39	6.35	0.3	29.2	0.4	63.0	7.1	....do
2855	Do	11.29	0.62	27.41	0.62	56.41	3.63	0.7	30.9	0.7	63.6	4.1	....do
2856	Do	9.89	0.72	26.76	0.63	56.86	5.14	0.8	29.7	0.7	63.1	5.7	Mass. State Ex. Sta. Rep., 1889, p. 134.
2857	Do	7.85	1.65	37.87	1.47	35.13	16.03	1.8	41.1	1.6	38.1	17.4	....do
2858	Do	9.62	0.90	21.97	3.89	56.57	7.05	1.0	24.3	4.3	62.6	7.8	Mass. State Ex. Sta. Rep., 1889, p. 135.
2859	Do	9.80	1.08	28.23	1.53	53.05	6.31	1.2	31.3	1.7	58.8	7.0	....do
2860	Do. *c*	10.52	0.70	29.70	0.81	54.90	3.37	0.8	33.2	0.9	61.3	3.8	N. H. Ex. Sta. Bul. 8, 1888
2861	Do. *b*	7.30	1.20	36.89	1.02	37.28	16.31	1.3	39.8	1.1	40.2	17.6	Mass. State Ex. Sta. Bul. 37, 1880
	All analyses, excluding Nos. 2832–2834, 2857, and 2861. Maximum	12.29	1.67	25.34	5.03	58.53	9.61	1.4	39.3	5.4	66.3	10.6	
	Minimum	6.40	0.09	21.25	0.27	44.72	3.37	0.1	22.7	0.3	32.9	3.8	
	Average	**9.55**	**0.74**	**29.41**	**1.60**	**52.44**	**6.26**	**0.8**	**32.5**	**1.8**	**57.9**	**7.0**	
2862	Buffalo sugar meal, 1 bushel said to weigh 50 pounds.	62.91	0.15	3.27	2.00	27.60	4.07	0.5	8.8	5.4	74.4	10.9	Conn. State Ex. Sta. Rep., 1888, p. 153.
2863	Glucose waste, from glucose factories after separating starch.	76.00	0.51	3.72	0.75	17.39	1.63	2.1	15.5	3.1	72.5	6.8	U. S. Dept. Agr. Rep., 1880, p. 169
2864	Sugar feed, kiln-dried	6.57	3.22	13.50	10.65	54.85	11.21	3.4	14.5	11.4	58.7	12.0	Conn. State Ex. Sta. Rep., 1881, p. 83.
2865	Do	10.40	0.78	13.13	8.44	61.38	5.87	0.9	14.7	9.4	68.5	6.5	....do
2866	Gluten No. 1, feed	11.66	0.56	17.81	3.08	59.56	7.33	0.7	20.1	3.5	67.4	8.3	Conn. State Ex. Sta. Rep., 1881, p. 152.
	BY-PRODUCTS FROM MAIZE IN STARCH MANUFACTURE.												
	Starch feed, wet:												
2867	Starch waste	72.19	0.12	3.56	3.36	18.78	1.99	0.4	12.9	12.0	67.5	7.2	Middletown (Conn.) Ex. Sta. Rep., 1877–'78, p. 38.
2868	Starch waste, from Glen Cove factory	62.27	0.27	5.67	1.58	28.90	1.31	0.7	15.0	4.2	76.6	3.5	Conn. State Ex. Sta. Rep., 1878, p. 76.
2869	Do	64.98	0.27	5.81	2.83	22.73	3.38	0.8	16.6	8.0	64.9	9.7	N. J. Ex. Sta. Rep., 1883, p. 74
2870	Do	68.51	0.21	6.55	2.07	18.69	3.97	0.6	20.8	6.6	59.4	12.6	N. Y. State Ex. Sta. Rep., 1885, p. 306.
2871	Do	64.50	0.21	4.65	4.34	24.30	2.00	0.6	13.1	12.2	68.5	5.6	....do
2872	Do	63.79	0.23	7.70	3.29	20.72	4.27	0.7	21.3	9.1	57.1	11.8	....do
2873	Do	63.60	0.24	7.66	3.68	20.78	4.04	0.6	21.1	10.1	51.1	11.1	....do
2874	Do	65.50	0.18	4.31	4.29	22.46	3.26	0.5	12.5	12.4	65.1	9.5	....do
2875	Do	57.04	0.37	9.63	3.24	25.34	4.38	0.9	22.4	7.5	59.0	10.2	Mass. State Ex. Sta. Rep., 1886, p. 42.
2876	Do	69.95	0.60	4.29	4.41	18.67	2.08	2.0	14.3	14.7	62.1	6.9	Ohio Ex. Sta. Rep., 1887, p. 259
2877	Do	66.53	0.25	6.01	2.00	22.47	2.74	0.8	18.2	6.0	66.9	8.1	Conn. State Ex. Sta. Rep., 1888, p. 153.
2878	Do	66.19	0.48	7.58	1.07	19.63	4.25	1.4	22.4	5.5	58.1	12.6	Vt. Ex. Sta. Rep., 1888, p. 76
	Maximum	72.19	0.60	9.63	4.41	28.90	4.38	2.0	22.4	14.7	68.5	12.6	
	Minimum	62.27	0.12	3.56	1.58	18.67	1.31	0.4	12.5	4.2	51.1	3.5	
	Average	**65.42**	**0.29**	**6.12**	**3.08**	**21.95**	**3.14**	**0.8**	**17.6**	**8.9**	**63.6**	**9.1**	

ANALYSES OF AMERICAN FEEDING STUFFS—Continued.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	BY-PRODUCTS AND WASTE MATERIALS—Continued.													
	BY-PRODUCTS FROM MAIZE IN STARCH MANUFACTURE—continued.													
	Starch feed, dried:	%	%	%	%	%	%	%	%	%	%	%		
2879	Residue from starch works	8.88	1.02	15.13	8.30	58.04	8.63	1.1	16.6	9.1	63.7	9.5	N. J. Ex. Sta. Rep., 1880, p. 46	2879
2880	Starch refuse, dry feed	6.00	0.72	16.04	13.02	58.14	6.08	0.8	17.0	13.9	61.8	6.5	N. Y. State Ex. Sta. Rep., 1885, p. 306	2880
2881	Corn refuse	9.22	9.35	10.13	1.23	65.27	3.80	10.3	11.2	1.3	73.0	4.2	Wis. Ex. Sta. Rep., 1888, p. 141	2881
	BY-PRODUCTS FROM OATS.													
2882	Oat bran	7.70	3.70	7.10	19.30	57.90	2.30	4.1	7.8	21.3	64.3	2.5	Ontario Agr. Col. Bul. 14, 1887, p. 6	2882
2883	Oat feed, from oatmeal manufacture *c*	8.19	4.24	12.64	12.48	56.31	6.14	4.6	13.8	13.6	61.2	6.8	Conn. State Ex. Sta. Rep., 1886, p. 111	2883
2884	Middlings, from oatmeal manufacture	9.19	3.24	20.00	3.80	56.19	7.58	3.5	22.0	4.2	61.9	8.4	Conn. State Ex. Sta. Rep., 1888, p. 151	2884
2885	Oat feed *b*	6.36	3.18	15.27	3.74	63.68	7.77	3.4	16.3	4.0	68.0	8.3	Mass. State Ex. Sta. Bul. 37, 1890	2885
2886	Do. *b*	6.85	4.19	16.21	4.38	61.67	6.70	4.5	17.4	4.7	66.2	7.2	do	2886
	Average, excluding 2882	**7.65**	**3.71**	**16.03**	**6.10**	**59.46**	**7.05**	**4.0**	**17.3**	**6.6**	**64.4**	**7.7**		
	BY-PRODUCTS FROM BARLEY.													
2887	Barley bran	12.00	4.10	14.80	19.40	45.60	4.10	4.7	16.8	22.0	51.8	4.7	Ontario Agr. Col. Bul. 14, 1887, p. 6	2887
2888	Barley feed, from pearled barley	13.20	4.25	11.94	7.98	59.38	3.25	4.8	13.6	9.2	68.6	3.8	Conn. State Ex. Sta. Rep., 1886, p. 112	2888
2889	Barley screenings	12.42	3.60	12.12	7.62	61.60	2.64	4.1	13.8	8.6	70.4	3.1	Conn. State Ex Sta. Rep., 1888, p. 151	2889
2890	Do	12.02	3.51	12.50	7.00	62.03	2.94	4.0	14.1	8.0	70.5	3.4	do	2890
	Average	**12.22**	**3.55**	**12.31**	**7.31**	**61.82**	**2.79**	**4.0**	**14.0**	**8.3**	**70.4**	**3.3**		
2891	Malt sprouts	11.55	6.68	25.91	9.30	45.47	1.09	7.5	29.3	10.5	51.6	1.1	Conn. State Ex. Sta. Rep., 1877, p. 50	2891
2892	Do	7.31	6.59	21.94	10.88	50.30	2.98	7.1	23.7	11.9	54.1	3.2	N. Y. Cornell Ex. Sta. Rep., 1883, p. 41	2892
2893	Do	11.97	3.75	21.00	11.99	50.00	1.29	4.3	23.9	13.6	56.7	1.5	Wis. Ex. Sta. Bul. 3., p. 6	2893
2894	Do. *b*	10.47	12.48	14.81	60.84		1.40	13.9	16.4	68.1		1.6	N. J. Ex. Sta. Rep., 1885, p. 166	2894
2895	Do	10.10	5.84	23.87	10.76	48.05	1.38	6.5	26.5	11.9	53.5	1.6	Conn. State Ex. Sta. Rep., 1888, p. 32	2895
	Average all complete analyses	**10.23**	**5.72**	**23.18**	**10.73**	**48.46**	**1.68**	**6.3**	**25.8**	**11.8**	**54.2**	**1.9**		

	Brewers' grain, wet:														
2896	**No particulars given**	78.50	1.07	4.69	3.11	12.63		5.0	21.8	14.5	58.7		Conn. Bd. Agr. Rep., 1872, p. 428	2896
2897	**One bushel weighs 70 pounds**	75.24	0.29	5.94	3.87	13.19	1.47	1.2	24.1	15.6	53.2	5.9	Middletown (Conn.) Ex. Sta. Rep., 1877–'78, p. 38.	2897
2898	**No particulars given**	76.40	0.87	5.56	3.43	11.86	1.88	3.7	23.6	14.5	50.2	8.0	N. J. Ex. Sta. Rep., 1880, p. 46	2898
2899	**Do**	76.23	0.92	5.56	3.55	11.68	2.06	3.9	23.6	14.9	48.8	8.8	....do	2899
2900	**Do**	78.21	1.36	4.79	3.20	11.65	0.79	6.3	22.0	14.7	53.4	3.6	Conn. State Ex. Sta. Rep., 1881, p. 85	2900
2901	**Do**	68.64	1.51	7.75	4.99	14.17	2.94	4.8	24.7	15.9	45.3	9.3	N. J. Ex. Sta. Rep., 1881, p. 53	2901
2902	**Do**	75.50	0.97	6.19	5.58	10.11	1.65	4.0	25.1	22.5	41.5	6.9	....do	2902
2903	**Do**	71.54	1.16	6.30	3.10	15.73	2.18	4.1	22.1	10.9	55.2	7.7	N. J. Ex. Sta. Rep., 1883, p. 74	2903
2904	**Do**	75.27	0.86	5.65	3.16	13.37	1.70	3.5	22.9	12.8	53.9	6.9	N. J. Ex. Sta. Rep., 1884, p. 107	2904
2905	**Do.** *b*	68.60	1.51	6.88	4.23	15.94	2.84	5.1	21.9	13.5	50.5	9.0	....do	2905
2906	**Do**	74.98	0.87	5.18	3.53	14.13	1.31	3.5	20.7	14.1	56.5	5.2	N. Y. State Ex. Sta. Rep., 1884, p. 332	2906
2907	**Do**	79.41	0.76	4.27	3.05	11.67	0.84	3.7	20.7	14.8	56.7	4.1	....do	2907
2908	**Do**	76.54	0.98	4.44	4.00	12.60	1.35	4.2	18.9	17.4	53.7	5.8	....do	2908
2909	**Do**	76.92	1.13	5.33	4.17	11.06	1.39	4.9	23.1	18.0	48.0	6.0	....do	2909
2910	**Do**	76.21	0.96	4.83	4.38	12.21	1.41	4.0	20.3	18.4	51.4	5.9	....do	2910
2911	**Do**	75.57	0.95	4.89	3.74	13.41	1.44	3.9	20.0	15.3	54.9	5.9	....do	2911
2912	**Do**	78.34	0.95	5.74	4.17	9.57	1.43	4.4	26.6	19.2	43.2	6.6	Vt. Ex. Sta. Rep., 1888, p. 76	2912
	All complete analyses.. Maximum	79.41	1.51	6.88	5.58	15.94	2.94	6.3	26.6	22.5	56.7	9.3		
	All complete analyses.. Minimum	68.60	0.29	4.27	3.05	9.57	0.79	1.2	18.9	10.9	41.5	3.6		
	All complete analyses.. Average	**75.66**	**0.96**	**5.44**	**3.82**	**12.54**	**1.58**	**3.9**	**22.4**	**15.7**	**51.5**	**6.5**		
2913	**Brewers' grains, dried**	6.23	3.31	19.25	10.24	56.80	4.17	3.5	20.5	10.9	60.7	4.4	Conn. State Ex. Sta. Rep., 1883, p. 86	2913
2914	**Do**	11.91	3.63	20.25	11.60	46.10	6.51	4.1	23.0	13.2	52.3	7.4	....do	2914
2915	**Do**	6.43	3.82	20.19	11.20	52.35	6.01	4.3	21.6	12.0	55.7	6.4	N. J. Ex. Sta. Rep., 1883, p. 74	2915
2916	**Do**	9.52	16.25	13.76	15.21	39.40	5.86	18.0	15.2	16.8	53.5	6.5	Wis. Ex. Sta. Rep., 1888, p. 141	2916
	Average, excluding No. 2916	**8.19**	**3.59**	**19.90**	**11.01**	**51.75**	**5.56**	**3.9**	**21.7**	**12.0**	**56.3**	**6.1**		
2917	**Brewers' grains, kiln dried**	2.57	3.97	20.38	11.79	54.89	6.40	4.0	20.9	12.1	56.4	6.6	Conn. State Ex. Sta. Rep., 1880, p. 88	2917
2918	**Spent brewers' grains** *c*	6.98	5.72	19.06	14.79	51.64	1.81	6.1	20.5	15.9	55.5	2.0	Mass. State Ex. Sta. Rep., 1888, p. 92	2918
	BY-PRODUCTS FROM RYE.													
2919	**Rye bran**	12.88	2.89	12.58	2.54	66.96	2.15	3.3	14.4	2.9	76.9	2.5	Middletown (Conn.) Ex. Sta. Rep., 1877–'78, p. 27.	2919
2920	**Do**	10.30	3.54	16.81	4.07	62.68	2.60	4.0	18.7	4.5	69.9	2.9	Conn. State Ex. Sta. Rep., 1878, p. 75	2920
2921	**Do**	13.70	4.46	16.38	3.92	59.75	1.79	5.2	19.0	4.5	69.2	2.1	Mass. State Ex. Sta. Rep., 1883, p. 82	2921
2922	**Do**	12.31	4.35	16.06	4.09	60.15	3.04	5.0	18.3	4.7	68.6	3.4	Conn. State Ex. Sta. Rep., 1885, p. 42	2922
2923	**Do.** *b*	13.26	2.34	12.81	69.54		2.02	2.7	14.6	80.4		2.3	N. J. Ex. Sta. Rep., 1885, p. 170	2923
2924	**Rye bran, old process** *b*	10.62	2.61	12.94	72.13		1.70	2.9	14.5	80.7		1.9	....do	2924
2925	**Rye bran** *b*	13.74	3.66	13.63	65.09		3.85	4.3	15.7	75.5		4.5	....do	2925
2926	**Do.** *b*	12.39	3.11	13.31	68.23		2.96	3.5	15.1	78.0		3.4	....do	2926
2927	**Do.** *b*	11.68	3.06	14.35	68.28		2.60	3.4	16.3	77.4		2.9	....do	2927
2928	**Do**	8.18	3.15	15.16	3.18	67.55	2.78	3.4	16.5	3.5	73.6	3.0	Mass. State Ex. Sta. Rep., 1886, p. 40	2928

ANALYSES OF AMERICAN FEEDING STUFFS—Continued.

		In fresh or air-dry material.						Calculated to water-free substance.					References to publications.	
		Water.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.	Ash.	Protein.	Fiber.	Nitrogen-free extract.	Fat.		
	BY-PRODUCTS AND WASTE MATERIALS—Continued.													
	WASTE PRODUCTS SEPARATED FROM WHEAT—continued.	%	%	%	%	%	%	%	%	%	%	%		
3115	Flour of screenings	13.32	2.92	9.38	8.99	62.27	3.12	3.4	10.8	10.3	71.9	3.6	Univ. Minn. Ex. Sta. Bul. 8, 1889, p. 14	3115
3116	Do	12.14	2.92	7.25	3.83	69.89	3.97	3.3	8.3	4.4	79.5	4.5	....do	3116
3117	Do	13.20	3.19	10.19	3.80	65.86	3.76	3.7	11.7	4.4	75.9	4.3	....do	3117
	Average	**12.88**	**3.01**	**8.94**	**5.54**	**66.01**	**3.62**	**3.4**	**10.2**	**6.3**	**76.0**	**4.1**		
3118	Cockle bran	11.37	3.02	9.44	10.97	62.39	2.81	3.4	10.7	12.4	70.3	3.2	....do	3118
3119	Do	11.84	3.09	10.50	9.08	63.37	2.12	3.5	11.9	10.2	72.0	2.4	....do	3119
3120	Do	10.18	3.55	11.92	7.58	64.36	2.41	3.9	12.2	8.4	71.8	2.7	....do	3120
	Average	**11.13**	**3.22**	**10.62**	**9.21**	**63.37**	**2.45**	**3.6**	**11.9**	**10.3**	**71.4**	**2.8**		
	BY-PRODUCTS FROM RICE.													
3121	Rice bran	9.30	8.35	12.78	2.00	62.34	5.23	9.3	14.0	2.2	68.8	5.7	U. S. Dept. Agr. Rep., 1880, p. 169	3121
3122	Rice bran, "Douse"	8.78	12.40	10.93	17.76	41.93	8.20	13.6	11.9	19.4	46.1	9.0	N. C. Ex. Sta. Rep., 1882, p. 91	3122
3123	Rice bran, No. 1	9.96	9.26	13.56	7.00	49.32	10.90	10.3	15.0	7.9	54.8	12.0	La. Dept. Agr. Bul. 9, p. 35	3123
3124	Rice bran, No. 2	9.56	8.82	11.81	9.85	50.46	9.50	9.7	13.0	10.9	56.0	10.4	....do	3124
3125	Rice bran *a*	10.67	11.00	11.29	10.95	46.02	9.97	12.4	12.6	12.3	51.6	11.1	La. Ex. Sta. Bul. 24, p. 389	3125
	Maximum	10.67	12.40	13.56	17.76	62.34	10.90	13.6	15.0	19.4	68.8	12.0		
	Minimum	8.78	8.35	10.93	2.00	41.93	5.23	9.3	11.9	2.2	46.1	5.7		
	Average	**9.65**	**9.97**	**12.07**	**9.51**	**50.04**	**8.76**	**11.0**	**13.4**	**10.4**	**55.5**	**9.7**		
3126	Rice hulls, lowland	7.70	15.10	4.68	30.27	41.60	0.65	16.3	5.1	32.8	45.1	0.7	N. C. Ex. Sta. Rep., 1882, p. 91	3126
3127	Rice hulls, upland	8.50	10.52	3.12	38.57	38.74	0.55	11.4	3.5	42.1	42.4	0.6	....do	3127
3128	Rice hulls *a*	8.27	13.85	2.89	38.15	35.99	0.85	15.1	3.2	41.6	39.2	0.9	La. Ex. Sta. Bul. 24, p. 389	3128
	Average	**8.16**	**13.16**	**3.56**	**35.67**	**38.77**	**0.68**	**14.4**	**3.9**	**38.8**	**42.2**	**0.7**		
3129	Rice polish	11.21	2.80	12.93	2.41	62.96	7.69	3.2	14.4	2.7	71.1	8.6	N. C. Ex. Sta. Rep., 1882, p. 91	3129
3130	Rice polish, No. 1	9.00	7.37	11.37	5.86	59.90	6.50	8.1	12.5	6.4	65.9	7.1	La. Dept. Agr. Bul. 9, p. 35	3130

3131	**Rice polish, No. 2**	9.33	11.30	11.38	14.45	45.54	8.00	12.1	12.5	15.9	50.7	8.8	....do	3131
3132	**Rice polish *a***	10.63	5.45	10.94	2.62	63.34	7.02	6.1	12.2	2.9	70.9	7.9	La. Ex. Sta. Bul. 24, p. 389	3132
	Average	**10.04**	**6.73**	**11.65**	**6.33**	**57.95**	**7.30**	**7.4**	**12.9**	**7.0**	**64.6**	**8.1**		
	BY-PRODUCTS FROM BUCKWHEAT.													
3133	Buckwheat bran *b*	13.22	4.48	20.06	56.71		5.53	5.2	23.1	65.4		6.3	N. J. Ex. Sta. Rep., 1885, p. 168	3133
3134	Do. *b*	13.04	3.75	23.53	53.27		6.08	4.4	26.9	61.7		7.0	....do	3134
3135	Buckwheat bran and middlings *b*	13.06	3.59	18.87	59.58		4.90	4.1	21.6	68.7		5.6	....do	3135
3136	Do. *b*	14.55	3.50	17.38	59.99		4.58	4.1	20.3	70.2		5.4	....do	3136
3137	Buckwheat bran, old process *b*	16.04	2.42	10.00	69.35		2.19	2.9	11.9	82.6		2.6	....do	3137
3138	Buckwheat bran	14.00	3.40	17.10	14.70	46.40	4.40	4.0	19.9	17.0	54.0	5.1	Ontario Agr. Col. Bul. 14, 1887, p. 6	3138
3139	Do	9.03	3.42	6.44	31.36	47.68	2.07	3.8	7.1	34.5	52.3	2.3	Vt. Ex. Sta. Rep., 1887, p. 134	3139
3140	Buckwheat hulls	14.07	2.27	4.87	38.49	39.20	1.10	2.7	5.7	44.7	45.7	1.2	Conn. State Ex. Sta. Rep., 1886, p. 111.	3140
3141	Buckwheat middlings	16.33	5.50	30.31	4.02	36.29	7.55	6.6	36.1	4.8	43.5	9.0	....do	3141
3142	Do	9.52	4.54	25.13	2.43	52.71	5.67	5.0	27.8	2.7	58.2	6.3	Vt. Ex. Sta. Rep., 1887, p. 133	3142
3143	Do	13.71	4.35	31.25	5.70	36.93	8.06	5.1	36.2	6.6	42.9	9.2	Conn. State Ex. Sta. Rep., 1888, p. 152.	3143
	Average	**13.18**	**4.79**	**28.89**	**4.05**	**41.99**	**7.10**	**5.5**	**33.3**	**4.6**	**48.5**	**8.1**		
	BY-PRODUCTS FROM COTTON SEED.													
3144	Cotton seed cake	6.82	7.80	44.41	11.76	12.74	16.47	8.4	47.6	12.6	13.7	17.7	Trans. Conn. Agr. Soc., 1857, p. 84	3144
3145	Cotton-seed meal	7.24	5.83	45.45	3.08	24.39	18.01	6.3	44.7	3.3	26.3	19.4	Middletown (Conn.) Ex. Sta. Rep., 1877–'78, p. 38.	3145
3146	Do	8.10	7.95	43.40	6.48	20.12	13.95	8.8	47.2	7.1	21.7	15.2	U. S. Dept. Agr. Rep., 1880, p. 169	3146
3147	Do	8.69	7.34	44.56	3.88	23.56	11.97	8.1	48.8	4.3	25.6	13.2	N. J. Ex. Sta. Rep., 1880, p. 46	3147
3148	Do	8.87	6.99	45.00	4.65	22.89	11.60	7.7	49.4	5.1	25.1	12.7	Conn. State Ex. Sta. Rep., 1880, p. 84.	3148
3149	Do	8.87	7.34	43.06	4.83	23.73	12.17	8.1	47.2	5.3	26.0	13.4	....do	3149
3150	Do	9.06	7.50	42.50	4.24	22.12	14.58	8.2	46.7	4.7	24.3	16.1	Conn. State Ex. Sta. Rep., 1881, p. 84.	3150
3151	Do	8.90	8.30	43.75	4.09	19.07	15.89	9.1	48.0	4.5	20.9	17.5	U. S. Dept. Agr. Rep., 1881–'82, p. 553	3151
3152	Do	7.62	6.38	47.60	8.18	15.68	14.54	6.9	51.5	8.9	16.9	15.8	....do	3152
3153	Do	5.78	5.73	50.81	4.59	21.82	11.29	6.1	53.9	4.9	23.1	12.0	N. J. Ex. Sta. Rep., 1882, p. 70	3153
3154	Do	7.57	6.58	46.69	3.70	21.32	14.14	7.1	50.5	4.0	23.0	15.4	....do	3154
3155	Do	9.06	8.80	40.20	5.20	24.30	12.50	9.6	44.1	5.7	26.9	13.7	Agr. of Me., 1882, p. 302	3155
3156	Do	8.82	6.71	40.90	4.83	25.19	13.55	7.3	44.8	5.3	27.8	14.8	N. Y. Cornell Ex. Sta. Rep., 1883, p. 41.	3156
3157	Do	7.61	6.53	46.12	4.90	21.67	13.17	7.1	49.9	5.3	23.5	14.2	Conn. State Ex. Sta. Rep., 1883, p. 89.	3157
3158	Do	7.29	6.85	45.31	5.32	21.93	13.30	7.4	48.9	5.7	23.7	14.3	....do	3158
3159	Do. *b*	6.65	7.71	43.69	4.30	27.41	10.24	8.3	46.7	4.7	29.3	11.0	N. J. Ex. Sta. Rep., 1883, p. 74	3159
3160	Do. *b*	6.89	7.80	42.56	8.05	21.58	13.12	8.3	45.7	8.6	23.3	14.1	....do	3160
3161	Do	9.13	6.91	42.75	5.71	23.84	11.66	7.6	47.0	6.3	26.3	12.8	Mass. State Ex. Sta. Rep., 1883, p. 84.	3161
3162	Do	8.38	7.79	38.91	6.17	26.89	11.86	8.5	42.5	6.7	29.4	12.9	Mass. State Ex. Sta. Rep., 1883, p. 85.	3162
3163	Cotton-seed meal, new (roller) process	7.10	8.68	39.56	7.00	24.89	12.77	9.3	42.6	7.5	26.9	13.7	....do	3163
3164	Cotton-seed meal, old (press) process	8.15	6.84	33.54	6.80	31.08	13.59	7.5	36.5	7.4	33.9	14.7	Mass. State Ex. Sta. Rep., 1883, p. 86.	3164
3165	Cotton-seed meal	7.09	8.50	23.27	9.78	38.68	12.68	9.2	25.0	10.5	41.7	13.6	Mass. State Ex. Sta. Rep., 1883, p. 87.	3165
3166	Do	7.59	6.48	44.00	2.77	25.72	13.44	7.0	47.6	3.0	27.9	14.5	Univ. Wis. Ex. Sta. Bul. 3, p. 6	3166
3167	Do	18.52	6.55	35.21	5.96	21.44	12.32	8.0	43.2	7.3	26.4	15.1	N. Y. Ex. Sta. Rep., 1884, p. 333	3167
3168	Do. *b*	10.67	6.63	43.25	29.06		10.39	7.4	48.4	32.6		11.6	N. J. Ex. Sta. Rep., 1885, p. 172.	3168
3169	Do. *b*	7.99	6.43	44.31	28.39		12.88	7.0	48.1	30.9		14.0	....do	3169

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